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Lord, Frederic Wait

Ethics of contracting and
the stabilizing of profits

Garden City, New York

1918

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ETHICS OF CONTRACTING

AND
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OF PROFITS

BY
F. W. LORD



GARDEN CITY NEW YORK
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1918

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THIS BOOK IS INSCRIBED TO ARTHUR
JEROME EDDY, ORIGINATOR OF THE
OPEN PRICE PLAN, A MOST PRACTICAL
AND ETHICAL METHOD OF STABILIZING
PROFITS.

* * * * *

RECOGNITION IS ALSO GIVEN TO MANY
CONSTRUCTIVE IDEAS ON MERCHANT-
DISING SUGGESTED BY WILLIAM L.
GOODWIN. TO F. J. McNULTY THE
AUTHOR IS INDEBTED FOR A VERY
FAIR AND CLEAR STATEMENT OF THE
PRINCIPLES OF TRADES-UNIONISM.

PREFACE

THE author of this book has endeavoured to set forth, as the result of nearly twenty-five years' experience, some suggestions and ideas which may be of value, not only to the contractor, but to those with whom he comes into business contact: the owner, architect, consulting engineer, general contractor, manufacturer, jobber, and last, but not least, the workmen's union.

Under different headings will be pointed out customs with which every contractor is familiar that are in various degrees deplorable. To a great extent these sharp practises and petty meannesses differentiate the commercialism of business from the dignity of a

profession. Business is the art of interchanging work and services through the medium of money, but from time immemorial, the seller has endeavoured to get the better of the buyer, and the buyer of the seller. With the professions, the idea that should be, and often is, uppermost, is the giving of service, the compensation being a matter of minor consideration. With business, the uppermost idea is generally the extent of the compensation, and, just as soon as the professional man allows himself to be governed by commercial considerations, he is lowered to the business level. Similarly, if the business man has as his main object the giving of full value for his services, his occupation is elevated to the dignity of a profession.

One of the easiest things to do is to find fault with things or with the way they are being done. Faults are always

more or less evident, and it is easy and natural to point them out, but if criticism stops there it does little good.

Constructive criticism differs from the fault-finding kind in the same general way that anything constructive differs from what tears apart or destroys. The one crushes and inhibits; the other elevates and helps.

The object of this book will be to show that it is for the best interests of all persons concerned in a building operation to co-operate and to treat each other openly and fairly, rather than to try to get ahead of one another by any of the thousand and one ways which are so common.

No claim is made for originality in the predominating idea that the only satisfactory way to attain real success is by the simple straightforward path of treating everybody in just the same way

one likes to be treated oneself. Everyone acknowledges this rule academically, but its practical application often appears difficult.

In addition to ethical considerations of various phases of the business of contracting, some constructive suggestions are here tendered that should be of benefit to the contractor and, it is hoped, to others with whom he has dealings. These ideas and recommendations will unquestionably make for more stabilized earnings in the business, instead of sometimes abnormal profits and sometimes unmerited losses. Above all, they are based on fairness and equity to both buyer and seller.

CONTENTS

	PAGE
Preface	vii
1. The Owner and the Contractor . .	1
2. The Architect and the Contractor .	9
3. The Consulting Engineer and the Contractor	16
4. The General Contractor and the Sub-Contractor	26
5. The Contractor and the Union . .	39
6. The Contractor, the Supply House and the Manufacturer	57
7. The Contractor and his Competitors .	72
8. The Contractor and his Staff . . .	86
9. Suggested Codes of Practice for the Contractor	92
10. The Co-operative Secretary . . .	108
11. The Central Estimating Bureau . .	147
12. Price Stabilizing	155
Appendix	179

THE OWNER AND THE CONTRACTOR

THE immediate pecuniary consideration should not be the one and only basis of doing business.

At first thought, this might seem to imply throwing to the winds all the economic fundamentals of demand and supply, competition, and the law of the survival of the fittest. But not so; and the author of this book will aim to show how these ideas may be adapted to broad-minded and fair standards, rather than degraded by taking every technical and legal advantage possible. Furthermore, it will be shown that construction work cannot rightly be appraised by the mere comparison of the bids of compet-

ing firms. Instead, we shall see that the wiser and more equitable method of comparing competitive bids is not by studying the figures only, but also by considering the contractor's reputation for fair dealing, for doing good work, and for giving efficient service.

Some architects and engineers will tell the owner, and really believe what they say to be true, that their plans and specifications are so definite and binding that all bids may be judged by the figures alone. This is a fallacy, in spite of the assumption that none but first-class contractors are allowed to estimate. As the owner should appreciate, his architect is more or less compelled to defend this conventional way of obtaining prices, as otherwise, the owner would say, "What is the use of competition? Why not just give the order to some concern best fitted to do the work?" As

a matter of fact, under certain circumstances, this may be the best way but, as already mentioned, the author does not advocate eliminating competition, but will endeavour to point out that the owner's interests often may be best conserved by awarding the contract to other than the lowest bidder. Some of the reasons for this are as follows:

The low bidder may have a good reputation, but with a surfeit of work at the time be unable to handle the contract as well as ordinarily; he may not have had experience in just this particular type of building, or in the vicinity of the work, and thus be unfamiliar with local labour conditions; or he may not be so well able, for a variety of reasons, to obtain the proper men or materials as some other contractor; he may be careless or incompetent, or so careful

and fussy that he would delay the whole general progress of the building.

This question of time is a factor of much more importance than most owners appreciate. The fact that a specification states "time is the essence of the contract" does not make a slow contractor fast. The important fact to realize is that when a building is to be finished quickly it is essential that all the trades be kept up to speed all the time. It is a simple thing to prove that a few hundreds of dollars saved by letting just one of the sub-contracts to a slow or inefficient concern may so retard the whole operation that the apparent saving on this one contract really costs the owner thousands of dollars in interest and non-use of the building. Probably not one-quarter of the buildings started are done on time, but how often does the owner figure out or know what the delay has

cost? In almost all these cases the delay could have been avoided if more care had been exercised in the selection of the contractors, and if more recognition were given to the contractor who has always been prompt and efficient.

There is another reason why some contractors should be shown a preference, and that is, on personal or psychological grounds. In other words, some architects and builders, or some engineers and sub-contractors, pull well together; and when they thus work in harmony there is absolutely no question but that it is to the advantage of the owner. If opposite conditions prevail, not only does the quality of the work suffer, but also it takes longer to do the work; and certainly the cost is indirectly more.

In this discussion it must of course be borne in mind that the contractor's fail-

ings or virtues are all relative and that no contractor is perfect. As will be shown in the next chapter, one of the architect's functions should be to discriminate between bidders and weigh their relative advantages from the standpoint of the owner's ultimate interests, instead of from the immediate one of saving a small sum on the letting of the contract.

From the ethical standpoint, it is evident that such a policy is not unfair to the bidders; as the award goes to the one who is most deserving from the broadest standpoint. Specifications often state that the owner reserves the right to let the contract as he may see fit; and this prerogative should be more generally exercised.

One way of ranking contractors according to merit is to keep a list of those who are permitted to estimate, chang-

ing the order of names on the list from time to time, in accordance with the architect's or engineer's experience. If the contractor is late, makes mistakes, does poor work, over-charges for extras, is too technical, or in any other way gives trouble, it should be noted, and his ranking affected accordingly. Furthermore, it should be made known that such lists exist, as by this means the whole morale of the business is improved and the owner's interest best guarded. No one would think of buying a suit, a piano or a motor car on price alone, but would also consider the reputation of the maker.

It is consequently contended, and certainly with justice, that a contractor's years of faithful service should entitle him to a preference. Certainly a great incentive to doing good work would be the knowledge that it would be so rewarded.

Architects know very well that this is true, but few of them have the moral courage to use their influence in favour of one of the higher bidders, fearing that they might be criticised as having ulterior motives.

Most owners build but once, and they should trust just as much to the recommendations of their architects in the selection of the contractor as in the matter of plans and design.

THE ARCHITECT AND THE CONTRACTOR

IT is a somewhat unfortunate fact that most architects are poor business men. Their profession is one of the most delightful in the world, offering, as it does, unlimited opportunities to work out the uses of a building efficiently and economically and, at the same time, to produce a beautiful appearance. But the more artistic the architect is, the less liable he is to be proficient from the business standpoint. One reason why architects as a class are interesting, socially attractive and companionable, is because they look at life from the artistic instead of from the commercial side, and

naturally this detracts from their business efficiency.

The one who feels this business weakness the most is the contractor, as it is he with whom the architect deals. In the great majority of instances, the architect is better educated, and has had a broader training than the contractor, and it is, therefore, evident that the former should be the one to set the standard for the latter. Unfortunately, this is not always the case, one general instance being with regard to work which should have been included in the contract, but has not been so included, extra work thus being made necessary through the oversight, or lack of experience of the architect.

When some such item comes up, it is often the impulse of the architect to cover it up rather than make a straightforward explanation to the owner; and

either the contractor is made to do the work for nothing, or he is promised or allowed concessions in some other part of the work. Not infrequently the promised concession never materializes; and the owner has the work done without paying anything for it.

As the result, is it a wonder that the contractor, with what might be called his inferior ethical training, is tempted to seek redress by doing poor work, or by overcharging when the opportunity occurs? Nine times out of ten, when the time does come, he will more than make up for the injustice. Of course, two wrongs do not make one right but in this case the contractor cannot be very much blamed, even though his method of squaring the account is somewhat primitive.

Doubtless the architect justifies his procedure on the theory that he cannot

afford to, and should not be asked to finance his mistakes, be they errors of omission or commission. As a matter of fact, it is not his province to pay for his mistakes, though this may sound strange at first thought. As a general rule, architects are paid too little for their services rather than too much. Their commission never was intended as an insurance premium against defects or omissions; but the trouble with most architects is that they lack the courage to say so to their clients. There never was an architect who was infallible, and a certain factor of error should be expected and discounted by the owner, and it should be paid for by him.

The contractor has a wonderful opportunity to study and compare different architects and their methods, and all contractors of experience know that the most successful architects are those who

do not fear their clients and who insist on treating contractors with fairness; within limits, the more arbitrary and positive the architect is, the more he is respected by his client. The client engages him to plan, to choose, and otherwise to render expert service. If he always defers to his client he stands in his own light and can never expect to be pre-eminently successful. Of course, this does not mean that in matters of personal taste and comfort the client's wishes should always be subordinated to the ideas of the architect, although in most cases this is the safest plan.

A clear-sighted and able architect will not, for his part, scorn to take suggestions from the contractor, and it is obvious that in general things will work out to the best advantage if each is candid with the other as well as fair and straightforward.

To this should be added that instead of the architect's always having as his sole object to obtain for his client the lowest possible price from the contractor, he should be equally insistent that the latter be paid fairly for the work installed and for his services in doing it. The architect should recognize that the administrative part of a contractor's organization is as much a part of the work as are the labour and material, and good service should be paid for as well as good work.

In almost all buildings extras are unavoidable, especially with some of the trades, such as electric wiring. The architect almost never realizes how much extras cost, and often the contractor does not. The cost of the actual direct labour and materials entering into a change is comparatively easy to determine; but few contractors, and almost

no architects, appreciate the amount of indirect expense involved. Not only do extras interrupt the orderly progress and regular swing of the contract work, often at a large direct extra cost for labour to the contractor, but also the special overhead expense in looking after extras is disproportionately large. In fact, the sum of the office expense and interruption cost of an extra is often more than the measurable cost of labour and materials used.

In concluding, if the architect will use his experience and judgment in selecting a contractor who does good work and who gives good service, and if he will recommend a fair rather than necessarily the lowest price for the work, he may be assured he is serving his client, from the ultimate standpoint, in the very best way.

THE CONSULTING ENGINEER AND THE CONTRACTOR

THE consulting engineer should act as a clearing house for technical information—to select one of many possible solutions of the problem and see that it is carried out; to study and co-ordinate methods and materials with a view to determining their field of usefulness and applicability. The proper field of the engineer is not to design apparatus, but rather to determine the conditions under which it should operate; then to receive and select from among the suggested schemes offered by manufacturers and contractors that one which is economically and functionally the best.

The relationship between the engineer and the contractor should never be unfriendly, as each is dependent upon the other. Some contractors think they might dispense with the engineer, but all engineers require the services of the contractor. The most reputable contractors always welcome the employment of a consulting engineer, as he relieves them of much responsibility and prevents disputes with the owner over questions of charges. Of course, the shiftless, incompetent or dishonest contractor is averse to having an expert supervise his work and audit his accounts, but especially in cases where the original work has been altered or enlarged, the engineer, on account of his personal disinterestedness, is the one who is best fitted to convince the owner that the changes, etc., have been necessary, and the charges reasonable.

No fair-minded engineer stands in the way of a contractor's saving what he can in the cost of the work, provided the same or better results are accomplished. These practical short-cuts are part of the contractor's stock in trade and the wise engineer should encourage such savings. In the long run, by so doing, the engineer acquires many valuable ideas, thus increasing his efficiency and so benefiting the owner. If the contractor be allowed no leeway whatever with the specifications solely because the change would be at variance with them, an attitude of unfriendliness is apt to be engendered, resulting in friction, and often in positive loss to the owner.

A spirit of friendly co-operation between the engineer and the contractor should always be welcomed and encouraged. Any experienced engineer can recall instances in which serious mis-

takes would have been committed had not the contractor called them to his attention.

Some engineers object to a contractor's making substitutions in the specifications on the ground that it would be unfair to the other bidders. This is an untenable objection because any other bidder, if awarded the contract, would not hesitate to make a similar substitution provided the idea occurred to him. The substitutions should be made after, rather than before the contract is let, otherwise an intelligent comparison of the bids is difficult, if not impossible.

It is always difficult to know just where to draw the line in business ethics. One obvious distinction between right and wrong is the difference between what is fair to all concerned and what is one-sided. One of the most common unsound practices is to have a contractor

draw up competitive plans and specifications. Such work is essentially the function of the architect or the engineer. Whether or not a consulting engineer be engaged is largely a question to be decided between the architect and his client. Some architects with large office organizations employ their own specialists competent to write the engineering specifications; but, as a rule, it cannot be expected that an architect shall also be an engineer with knowledge adequate to the proper consideration of the many highly technical problems that arise in heating, ventilating, electric work, etc.

Some owners, especially those building for the first time, assume that the architect should know everything, and if a consulting engineer is suggested the client is apt to feel that the commission should come out of that paid to the

architect. This is not fair, and if the architect puts the case candidly as above outlined, the client will not object, unless he is short-sighted and unreasonable. It should be an easy matter to demonstrate that the superior training and experience of the engineer as a specialist makes him worth his fee, even though it be considered merely in the nature of a premium paid to guard against errors and inefficiencies.

Many architects, in order to get around this situation, will invite a contractor to lay out work and will then take bids on the plans and specifications so prepared. In the great majority of instances such an opportunity is considered both by the architect and by the contractor as a privilege, because it is thought that this preliminary study of the work and the knowledge which results give the contractor an advantage

over his competitors. As a matter of fact, as will be acknowledged by the most intelligent and experienced contractors, instead of this alleged privilege being an advantage, it is most decidedly just the reverse. The reason of this is as follows:

A contractor's layout is almost invariably recognized as such, because no name of any consulting engineer appears on the plans, and the competing contractors will criticize it, either as being lavish, in which case it will be insinuated that the favoured contractor who has laid out the work will cheapen it and not do it as specified if he is awarded the contract; or, the criticism will be that the layout has been made inadequate so as to be productive of extras.

From both points of view there is much on which to base the criticism, because it is often tacitly understood that

the contractor who does the free engineering is to get the contract at the price determined by the bids submitted; and, under these circumstances, with no consulting expert to supervise, the contractor, in nine cases out of ten, disregards the specifications and substitutes the cheapest sort of work that he thinks will pass.

The practice is bad and unfair, and it should be discountenanced. Even from the standpoint of the contractor who has also done the engineering it is often disadvantageous, and acts like a boomerang, as the architect will very likely not allow payment for *bona-fide* extras, on the theory that as the contractor laid out the work, he should have anticipated and included the extra in the contract specifications.

In a similar way, but for different reasons, it is not considered right for the

engineer to invade the domain of the contractor by purchasing direct from the manufacturers materials, appliances and apparatus. The engineer's argument that he can save the contractor's commission is in most cases not true. The contractor is generally a keener buyer than the engineer; and moreover all progressive manufacturers are willing and glad to allow the contractor a better price than when selling to the ultimate consumer, whether direct or through his engineer.

Furthermore, the advantages of a unit responsibility as to deliveries as well as installation make it better for the owner to hold the contractor responsible than to expect his engineer to coordinate properly the various items entering into the work.

Undoubtedly, some engineers are competent contractors, and, in the same

way, some contractors are the best engineers; but it is far better for the contractor to confine his attention to contracting and the engineer to limit his work to engineering. Similarly, it is a mistake for the builder also to be the architect; or the architect to be also the builder.

THE GENERAL CONTRACTOR AND THE SUB-CON- TRACTOR

As is evident from the context of this book, the various aspects presented of the ethics of contracting are those of the sub-contractor rather than of the general contractor. The sub-contractor's relationships embrace virtually all of those of the general contractor, whereas those of the general contractor cover only some of those of the sub-contractor.

In order to bring out more clearly this difference, it may be well to define more closely what is meant by the general contractor. Formerly, the accepted idea of a general contractor was of one who executed all portions of a building op-

eration with his own force of masons, carpenters and other necessary skilled and unskilled labourers.

Nowadays, by general contractor is almost invariably meant one who assumes an entire contract, but who sub-lets the various parts to specialists. Often such a general contractor will do with his own men the mason or carpenter work; but as a rule he will sub-let everything.

The wisdom of sub-letting is obvious, as any modern building operation requires a tremendous amount of detail and it is evident that a group of sub-contractors having trained administrative forces can work better, and more efficiently obtain and install the special materials required than any one organization. This is apparent when it is realized that in the plumbing, heating, electric work, etc., in each instance, hun-

dreds of articles have to be procured and installed, each one particularly specified or adapted for the work being done.

To know where to obtain to the best advantage, both as to time and price, all of the fittings and devices, each one often of special kind, size, shape, colour and manufacture, requires an intimate knowledge and experience which one cannot expect to find in the office of a general contractor. In addition to this complexity of material requirements must also be considered the question of skilled workmen. Most certainly the sub-contractor, constantly doing work of his special kind, will have better men and will do better work than a general contractor who only occasionally employs electricians, steamfitters, etc.

This phase of the contracting business is particularly mentioned, and to some degree elaborated upon, because

some general contractors, principally those who do only percentage work, attempt to justify their policy of not subletting anything by claiming to save the profits of the sub-contractor. Instead of making a saving, it may be safely said that such a course invariably adds to the cost, and also results in a poorer quality of work. The best proof of this statement is the fact that special departments of general contractors are never successful competitors of concerns who devote all of their time and ability to corresponding special branches of the business.

It might be suggested that the ethics of this situation were automatically guarded by the economics involved, but this is not always so, particularly where the general contractor is interested in the financing of the operation. In such cases the general contractor is supreme

and no opportunity ever arises to disprove his statements, because no two buildings are alike and, consequently, any excessive costs cannot be demonstrated by comparisons.

Another proof of the wisdom of subletting is given by the fact that some of the best builders have tried and abandoned the policy of doing such work direct, and even those general contractors who have their own mechanical departments (heating, electric work, etc.), sublet when they take a contract for a fixed price.

An abuse which has gone unrectified for too long a time is the withholding by the general contractor of money that has been earned by his sub-contractor. Careful inquiry shows that over ninety-five per cent. of general contractors do a large share of their business on the capital of their sub-contractors.

In fact, the custom is so common, that the mere unsupported statement of the general contractor that the owner has not paid him has come to be accepted almost as an absolute excuse for not making payments according to the terms of the contract. A certain amount of leniency should be shown by the sub-contractor when the general contractor has been unavoidably held up; but the injustice and serious hardship which the sub-contractor suffers is mostly on false representations; in other words, just because the general contractor has more pressing needs for the money properly due his sub-contractor, the latter is made to wait.

Very few sub-contractors can afford, or rather very few think they can afford, to antagonize the general contractor by insisting on being paid strictly in accordance with the contract terms, with

the result that the evil grows and flourishes, making it possible for the general contractor to do an increased amount of business, at the expense of the sub-contractor.

Another abuse, for which, however, the sub-contractor is partly to blame because he permits it, is the so-called shopping of bids. The practice is so well known, and is so almost universally followed that it may appear trite even to mention it; but, as a remedy will be proposed, it is thought advisable to illustrate the abominable custom by an example, so that those less intimate with the ins and outs of contracting may fully understand.

Let us say that the architect has asked several contractors to tender proposals for the complete structure, the specifications and plans detailing and describing what is to be done under the various

headings. Each of the general contractors proceeds to gather in bids on the various parts of the work by sending out scores of printed postal cards, each of which asks for "Your price on your line of work" on the building mentioned. These promiscuous invitations to estimate are often sent out absolutely without any discrimination as to the fitness of the bidder, and often ten or fifteen proposals are received, when not more than three or four of the firms so bidding are really competent to carry out the contract. The general contractor then tabulates the bids and uses the lowest one as the basis of his estimate.

When the general contract is awarded, the next step is in order. Three or four of the sub-contractors who have put in the lowest prices are given the "opportunity" of revising their figures, with the result that they all, including

the low man, reduce their bids. The general contractor then calls in the lowest bidder, or if he is notably poor or incompetent, one of the better contractors nearly as low in price, and addresses him substantially as follows:

"Mr. Smith, it is some time since you have done work for this office; the architect thinks very well of you and we would like to give you the contract; but your firm is considerably higher than other responsible bidders. If you can make your price lower the contract is yours."

If Mr. Smith is not very experienced he will assume that his estimate must be high, inasmuch as he has been told that his competitors are so much lower; and the offer is accepted. Even though he may doubt the veracity of the general contractor, he will think twice before refusing, partly to avoid offending and

partly because there is always a chance that the contract may be profitable or that it may lead to other work.

In all fairness, it should be acknowledged that Mr. Smith often follows this bad example when it comes to the purchasing of his supplies, and in a similar manner plays the dealers against each other; but the chances are that he would not do this if he had not been forced into it.

The practice is of course indefensible, its only excuse being that it is so general. To correct it is more than any one person or concern can do, but any association of sub-contractors or dealers could stop it, in either instance, overnight, if they would co-operate.

The sub-contractor suffers other abuses at the hands of the unscrupulous general contractor, which sometimes are as iniquitous as blackmail. For instance,

the sub-contractor is back-charged with all sorts of items, such as part of the cost of the watchmen, telephone, scaffolding, cleaning up, and all sorts of other items, regardless of any real liability involved. If these back-charges were moderate and divided in proportion, they might be more easily justifiable; but it is perfectly well known that even when they are included in the work of the general contractor, he charges the sub-contractor for them, not once only, but sometimes several times.

On one occasion a general contractor had in a building he was remodelling a newly painted room so damaged by the carelessness of an unknown workman that it had to be repainted. The general contractor, not knowing to whom to send the bill, sent it to thirteen of the sub-contractors at work in the building, stating in each case that it had been re-

ported that one of their men had caused the damage. Eight of these sub-contractors paid the bill rather than have a dispute with the contractor, who had much desirable work to give out. This, of course, is an extreme case, but it illustrates the advantage which is frequently taken of the sub-contractor.

It is evident that it is beyond the power of any individual to bring about reforms where such conditions exist. Even a good many individuals would be unable to accomplish much unless there were some means of voicing their protest together.

All such practices would cease to exist as soon as they became generally known, as no one in the wrong can bear the pressure of adverse public opinion and successfully continue in business.

A method of making known, and so

stopping all such acts of petty extortion, is described in the chapter devoted to the functions and duties of the professional secretary.

THE CONTRACTOR AND THE UNION

No intelligent employer objects to unions nowadays just because they are unions. Unquestionably the men have a right to organize, as it gives them a protection which they need and to which they are entitled. The power thus derived is very great, and dangerous when improperly applied; not so much perhaps to the employer as to the men themselves, although this is a point rather difficult for their rank and file to comprehend.

The faults of unionism are much more evident, and most often appear, during the first years of organization. It is hardly to be expected that when a group

of men organize and begin to feel their power they will not wish to show it at the first opportunity, even though their grievances may be trivial. This is demonstrated by the well-known fact that the longer the union has been in existence, the less frequently does it call a strike.

Much of the friction between employer and employé has been through the fault of the former; but fully as often the workmen have been at fault. This is because they have been badly advised, and also because they have been actuated by consideration of immediate instead of ultimate results. The bad advice has often been given by the ultra-radical members who, though in a small minority, frequent the meetings, and like to expound their economic theories, which sound well to a superficial listen-

er, but being industrially wrong will not work out.

In other words, many strikes are called not through any crying demand of the majority but through the workings of a very small minority who really do not represent the body as a whole.

If the so-called better element regularly attended the meetings to watch over the union's interests and share in its duties and responsibilities, ninety per cent. of the strikes that are called would never occur.

When the employer treats his men fairly and compensates them adequately the large majority are satisfied and work for him faithfully; yet there is generally a minority that it is impossible to satisfy no matter what is done.

It is necessary in practice to classify workmen into several grades, from the journeyman to the apprentice, with a

set rate for each; but this classification is probably against the best interests of the men as a whole. The reason is obvious; such a procedure to a great extent kills the ambition and eliminates the progressiveness of the individual. Of course, it raises the wages of poor workmen, but it just as certainly lowers the pay of his superiors. If this union wage standard ceased to exist there is no doubt that the incentive to the individual and therefore his productiveness, would be increased, with the result that the wage return as a whole would be augmented.

If there were no unions, and men were paid on the basis of their fitness only, undoubtedly many now receiving good wages would get much less. The unions in thus stabilizing wages function somewhat as an insurance medium; and the loss to the individual which would result

through his lack of efficiency is not felt by him, but is borne by those superior workmen who accept the same pay. Viewed in this light the arrangement has its advantages, as stable conditions are much better than unstable ones.

Far worse than the grading of pay, which is customary, and which from the practical standpoint is necessary, especially in large cities or wherever the personnel of the contractor's force is continually changing, is the iniquitous practice of limiting the amount of work that shall be done per day per man. It is fortunate that this practice is disappearing and now very seldom occurs, as it stultifies both the workman and the industry in which he is employed.

Many employers of large numbers of men are opposed to any recognition whatsoever of unions, on the theory that any concession made to the men is fol-

lowed by arrogant demands for more. Unfortunately, this has sometimes been true, but it should not be so. If a consistent policy of fair dealing with the men is followed there is little doubt of their responding in kind. The average artisan is just as fair and honest, if he is properly approached, as his employer; but hard experience, and poor advice by the disturbing element combine to make him suspicious.

The workmen or their union representatives should always have free access to the employer, and a spirit of open discussion of conditions and of grievances should be encouraged; and arbitration, as the only natural and fair method of settling disputes, should be always welcomed by both sides. Probably the only good argument which employers have against arbitration is that the labour unions have been known to

fail to live up to agreements. To correct this, unions might be incorporated, but this the unions do not favour, one of the main reasons given being that the action of a small and unrepresentative minority, holding session when the so-called better element is not present, is binding upon all members, thereby making every individual legally responsible. If unions were to incorporate, and if more inducement were offered to attend meetings by means, for instance, of rebating part of their dues to all those attending, this reason would not hold, and various advantages would follow: not only would the increased attendance be more truly representative and therefore better, but the added responsibility would elevate the cause and standing of unionism. It has been the common mistake both of unions and employers to hold their meetings behind closed doors,

but by having them open to all, criticism would be disarmed and fair dealings would be in a measure guaranteed. It is a tribute to the intelligence of some of the unions, and to some associations of employers that this tendency towards publicity is increasing.

It would be comparatively easy, if unions were generally incorporated, and thus negotiations and contracts made more binding, to inaugurate a stabilizing movement in regard to wages which would be beneficial alike to the workmen and to those who build for investment. By this is meant the adoption by the union in conference with the Federal Trade Commission, let us say, of a sliding scale of wages founded on the cost of living and based upon an adequate standard as a minimum. Such a scale would of necessity always be based on the costs of food, clothing, etc., of a pe-

riod previous to that contemporaneous with the scale; but the average would be fair, and if those intending to build could thus figure out the labour cost, this very uncertain item would be eliminated; and steadier employment would also thus be assured.

If by some such method a fair scale of wages could be arrived at, it would be a good idea to provide for a differentiation in scale depending on the assured term of employment. Any man would work at a lower rate if he were hired by the month than if hired by the day, and this would lead to giving the highest pay to those who work by the day, which is fair and reasonable. This would also tend towards having the younger and more vigorous men do the more arduous work, leaving such positions as those of apartment house engineers, electricians, etc., to be filled by the

older men who are not physically fit for the heavy work often required in building construction.

This whole problem of wage regulation is too large and complicated to be undertaken locally; it should be done nationally and in conference with the Federal Trade Commission, the National Chamber of Commerce or some other disinterested body.

It is well to remember that many workmen have not had many advantages, and as this is their misfortune rather than their fault, it is doubly the duty of every employer to help them out of any misconceptions and prejudices they may have, by open dealings and fair treatment, instead of constantly fighting and opposing them. Too many employers feel that it is a mistake to show any consideration for the men, fearing that it will be thought a sign of

weakness. This is a fallacy, and the men should be encouraged and treated as partners in business.

The power of the men through their organizations is tremendous, but is sometimes frittered away on trifling issues, and sometimes in unfair ways, in which case they fail to receive public support. The more experienced the union is, as when formed of skilled workmen, the less often are there any serious differences to be settled, and by far the largest proportion of strikes are called by the unskilled trades.

The sympathetic strike is the main weapon of the building trade unions, and is sometimes resorted to in the interests of what the labour unions call their fair employers. As the term fair is sometimes misunderstood a word of explanation is in order. In the dictionary of the labour movement the defini-

tion of a fair employer is "one who employs exclusively members of the union, pays their scale of wages, and adheres to the union rules." One of the fundamental aims of the building trades unions is to guard against upsetting the established rate of wages and conditions of employment, and when a firm of builders or contractors seek to do work not in accordance with the established union conditions, a sympathetic strike is sometimes called of allied trades. It will be seen that otherwise firms who pay the established rate, and accept the established hours for work are put at a disadvantage. This is one of the unions' reasons for the sympathetic strike, and from the standpoint of stabilizing business it is well taken, and for this reason, at any rate, is justifiable. But the cause of unionism is always injured if a sympathetic strike is unjustly called; and

in the eyes of the public a strike is unjust if called solely to force open-shop firms to discharge men just because these men are not members of a union. This injustice is especially felt when these firms pay the established union rate of wages, and otherwise live up to union conditions.

If unions, so to speak, had never been invented it is easily conceivable that a condition similar to slavery would exist. This of course would be intolerable as far as the men are concerned; and also the result would be economically detrimental. It is now acknowledged that the higher efficiency of free labor in the South has much more than offset the book value loss due to the emancipation of slaves. Conversely, if unions were omnipotent and were, without any restraint, able to dominate industry, the result would be harmful to themselves

as well as to others. Autocratic methods never succeed in the long run, whether attempted by capital or by labour; and if the analysis of any action of a group of men cannot stand the acid test of justice, the action is unwise to say the least, and had better not be taken.

Instead of trying to coerce firms to employ none but union men, it would be far better to elevate and improve the unions from within, so that no workman could afford to or would desire to stay out. As has been pointed out, this can be brought about by having the "better element" in the union take a dominant part instead of leaving the unrepresentative minority to run the business meetings.

In certain cities cases have been known where the labour unions have conspired with their employers for in-

creased wages, in return for which the union has undertaken to make it either impossible or else ruinously unprofitable for outside contractors to enter the local market. Doubtless the contractors making such agreements are as much, or even more, to blame morally than the workmen, but the unions should be made to understand that such tactics are in the end unprofitable and detrimental to their cause.

Probably very few members of any union feel that they owe any consideration towards their employer other than the giving of a day's work for a day's pay. In fact, if a workman appreciates this, and conscientiously endeavours to earn his wages, he is invariably prized by his employer as a real asset. But a further obligation exists, and it is only fair that the unions should co-operate with the contractors in a practical way

which will divert to the contractor much work that is now done by the owner direct. Such an arrangement, whereby the union would undertake to charge a higher rate to those classes not regularly engaged in the business, would, furthermore, be judged perfectly fair and reasonable. The ethical fact is that the workmen are indebted to their employer to no inconsiderable degree. First of all, it is the contractor who stabilizes the business and who employs most of the men in the trade. It is the contractor who makes up the payrolls and who has to furnish his workmen their income promptly and regularly, regardless of the financial strain to which he is often put.

Again, from a broader standpoint, the workman is under obligation to his employer for his technical training and trade education. If it were not for the

opportunity to see and be with skilled men, proficient in their calling, the apprentice would never learn; and, in the meanwhile, it is the contractor, his employer, who pays for mistakes and for the poor work which sometimes has to be done over again. Very seldom, if ever, is the workman called upon to correct his mistakes at his own expense.

It is not fair to indict all of the unions for not co-operating with the contractor, as in some trades this is done. But a case in which the workmen seem to have little regard for the contractor regularly engaged in the business is in the electric construction and wiring industry, where the workmen have no compunction in hiring out to any one regardless of the nature of their temporary employer's business. In fact, it is well known that during slack times the electrician will work for almost any one

at almost any rate, while the regular electric contractor is compelled by the union to pay the union scale, often fifty per cent. in excess of what the workman will accept from outside sources. It should be said, however, that this is done by individuals contrary to the rules of their unions, who by the nature of the circumstances find it difficult to prove that the workmen are working below the standard scale.

In concluding, it is well to remember, whether or not the reader believes in trade unions, that they are here to stay and that the condition must be met, and employers who realize this and have treated with the unions in the same spirit in which they have met other business problems, have benefited thereby, and have also thus tended to stabilize conditions in their industry.

THE CONTRACTOR, THE SUPPLY HOUSE AND THE MANUFACTURER

IN considering the exploitation, sale and distribution of manufactured goods to the consuming public it will be generally acknowledged that compensation should be given to the manufacturer, to the jobber or wholesaler, to the retailer and the contractor in accordance with services rendered.

Before discussing the inter-relationships of those several steps in the industrial ladder, it may be well to define clearly just what is meant by the different terms used; and then the proper function of each factor mentioned, for it is true that in many in-

stances these invade the province of the other or others.

Certainly no confusion arises in defining the term manufacturer. Sometimes he does little but assemble the parts that are made elsewhere, but in every instance it is understood that the manufacturer is the original source of the complete manufactured articles.

By a jobber or wholesaler is generally meant a merchant who deals in large quantities of goods and distributes them for resale.

The retailer, as such, sells in small quantities directly to the public; he is never taken as a contractor; but, as will be explained, the contractor is very often a retailer.

Although the ordinary meaning of a contractor is one who does work according to a contract, insofar as he is concerned with the exploitation, sale and

distribution of goods, he is a wholesaler if he is a large contractor, but only a retailer if he is a small contractor.

In referring to the different industrial agents mentioned, it was just stated that in many cases they were invading the provinces of each other, and thus functioning improperly in such instances. The question that is now presented is as to what is proper, and what is improper in that sense.

Obviously, from the economic standpoint of what is best for the greatest number, any unnecessary paralleling of effort or work is wrong. Furthermore, respect should be shown for certain customs of the trade, as these generally represent the evolution of what has been tried out in the past, and found to be fair and equitable. For instance, it may be said without much fear of contradiction that with the exception taken

up later, it is bad policy to merge a wholesale with a retail business, for if the retail specialist is obliged to compete with the wholesaler who also does a retail business, it will be found that the former is at a disadvantage, and so is not able to give proper service to the public. A retailer is put to certain well defined and necessary overhead or selling expense in keeping a store or show room in which the manufacturer's goods may be attractively exhibited, exploited and sold, and it is certainly unfair for a wholesaler who has only a small part of this selling expense to sell to the public at the retail price. The over-keen retail purchaser who seeks out the wholesale house should be made to pay the retail price; or, better still, be referred to the retailer; and this is the accepted practice in most business.

The exception to this rule is that of

the contractor, or contractor-dealer, as he is now often called, because as explained, if he is a large contractor he sells to the public in wholesale quantities; but if a small contractor his bill is generally for only a small quantity of material; and it is impossible to draw the line dividing the large contractor-dealer from the small one, especially so as at times the small contractor takes a comparatively large contract, and the large contractor often does small work.

The important fact that the contractor sells labour with supplies or materials does not detract in any way from his being a merchant, and as such he should receive the benefit of trade customs and differentials. This is the real meaning of the term contractor-dealer, as this phrase truly describes his functions. The firms that are relatively very small in number, but who have well-de-

partmentalized overhead organizations and give engineering services in addition to selling labour, materials and apparatus, are generally called contracting engineers to distinguish them from the contractor-dealer; but their function is about the same, only broader in scope.

Especially in the electrical industry does the manufacturer overlook the fact that the electrical contractor, whether he be of the dealer or engineer class, is exploiting, selling and mechanically distributing the goods manufactured; and is accordingly as much entitled to the resale differential in price as is any other merchant who sells a manufactured product to the public. Indeed, if any preference were to be shown it should be in favour of the contractor, as his services and intelligence are of a much higher order than those of one who merely buys stable articles and sells them again.

The contractor has the added difficulty and risk of selling labour with the manufacturer's product; moreover in the development of the electrical art and industry both the contractor-dealer and the contracting engineer play a most important part in perfecting and developing appliances of various kinds. Here again it is most unfair that such improvements be appropriated by the manufacturer without the giving of some commercial recognition to those who have worked them out.

It is becoming more and more the tendency of the time to eliminate the middle-man when he is not necessary; but just because some of this class are not much needed, it does not follow that they all are superfluous.

In the doubtful class comes, in the electrical trade again at least, the jobber, but the fundamental principles of

merchandizing of course apply equally well to any division of the building industry.

The electrical jobber is indispensable to the contractor-dealer class, and he is often most convenient to say the least, to the contracting engineer. The logical way therefore, to compensate the jobber, is for the services he renders, and this compensation should come from those who are benefited thereby.

It is the manufacturer who differentiates between the wholesale and the retail lot; and if the contractor-dealer or contracting engineer can buy and have shipped direct wholesale quantities, the jobber then comes within the category of the unnecessary middleman. The jobber, however, in many instances and in certain kinds of goods is a very necessary factor, and as such should be recognized and patronized.

Co-operation in the exploitation, sale and distribution of manufactured goods is just as important as co-operation in any phase of business life. The advantages and benefits of co-operation are many in number and various in kind. Without it, between and throughout the links of the commercial chain progress and development are retarded and made difficult; but with it, between the manufacturer, supply house and contractor, an efficient and intelligent campaign of advertising and publicity is easy to plan and to carry out, resulting in a larger volume of business and better profits, and also better service to the public.

Without co-operation all sorts of absolutely unnecessary duplications are certain in all sorts of supplies and fittings. By having half a dozen varieties of virtually the same thing on the mar-

ket instead of one kind, the contractor is inconvenienced, the supply house is put to an unnecessary expense, and very often all the manufacturers of such a fitting are losing money. By co-operating and standardizing on the best of the competitive devices prices will be lowered, and at the same time the profits of manufacturer, of supply house and of contractor will be increased. Furthermore, if such a policy were developed, the supply house could afford always to carry on hand a better supply, thus saving the contractor the expense and trouble of operating a more or less extensive store room.

One immediate result of such co-operation would be the standard numbering, naming and cataloguing of identical articles, thus saving no end of confusion and expense.

On broader lines, the foundation of

co-operation insofar as the manufacturer, the supply house and the contractor are concerned is the non-invasion by any one of the field of the other.

It is a mistake for the manufacturer to be a supply house, i.e., sell to the consumer, who is generally served by the supply house or contractor; but if goods are ordered from him direct, he should at least give the equivalent of a protective trade discount and at the same time observe the well recognized differential between wholesaler and retailer. It would be in a truer spirit of co-operation though, if he referred the purchaser to a good supply house.

Similarly it is a commercial error for the supply house to sell to the consumer at the same price as to the contractor. Although the supply house may have the legal right to sell direct at the same price, it is no more commercially

justified than it ever is for the wholesaler to sell at the retail price to the customer, who is essentially retail in character. The contractor who has spent his very best efforts, and very likely some of his money (if he had figured the contract too closely), naturally does not think his supply house is co-operating if, as soon as the contract is finished, he finds that the owner can buy all the materials at as low a figure as he himself has been paying. Instead of finding that his good will has tangible value, he sees that it has none, as the supply house furnishes the materials for all extensions to his original contract, and so makes it an inducement for the owner to do the work with his own force of men.

Another invasion by many supply houses of the field of the contractor is the furnishing of materials, on receipt

of an assignment of contract payments, to a workman who is without any financial resources, thus making it easy for any one to start in business without capital. The workman is satisfied as he thus obtains a little more than the prevailing rate of wages; but the practice is injurious to the industry, as it stimulates unfair competition by putting irresponsible concerns on a level with those who are legitimate contractors.

Other instances might readily be cited showing the ills that follow lack of co-operation, but enough have been pointed out to show how foolish and destructive it always is.

If the public profited by this predatory competition, there would at least be some advantage gained; but of course it is the public that really suffers the most through this lack of commercial efficiency.

It is difficult if not impossible to successfully impress on a business man the benefits coming from altruism. He must be reached through his bank account. In order to show therefore that his selfish interests are being furthered by altruistic methods, he must be educated in the thought that one of the best ways to permanently improve his own business is to better the fundamental conditions of the industry generally—and that the quickest and easiest way of bringing this about is by co-operation.

One of the most convincing and easy ways of advancing this idea is by the exchange of helpful suggestions and advice. The basis of commerce or trade is the exchange of commodities; but with each exchange, something of tangible value has to be parted with in order to acquire some other thing of the same

or similar value. With the exchange of ideas, however, it costs absolutely nothing to the givers, i. e., no pecuniary sacrifice has to be made, but to those who receive the good suggestions and helpful ideas the gain is often invaluable.

THE CONTRACTOR AND HIS COMPETITORS

It seems to be almost second nature with most business men to regard a competitor as an enemy, and any misfortune which he meets is considered as their gain. This is a most stupid idea and wrong economically and ethically. The spirit of the times is to co-operate, and on no other principle is a healthy, happy business existence assured.

It may sound out of place to suggest happiness as an object of business ethics, but it is certainly as much to be considered in business life as anything else. The main point is that it is perfectly consistent with success to be helpful to, and friendly with, one's busi-

HIS COMPETITORS

73

ness rivals. This does not mean, or in any way imply, collusion or illegal combination.

Many well-meaning codes of ethics applying to inter-relationships of contractors have been drawn up but have always tried to cover too much ground to be successful. It is impossible to formulate detailed procedure in sufficient fullness to cover every case. All that can be done to advantage is to advocate a wise mental and moral attitude and friendly in place of unfriendly action.

A few simple suggestions may, however, be helpful. Let a man make friends with his competitor. There are countless ways in which each can help the other. For instance, a man may warn his competitor in regard to the business methods of certain general contractors and speculative builders, and

in return expect a like warning in a similar case.

To illustrate: Certain speculative builders have been known to swindle their sub-contractors by having them estimate on incomplete specifications, certain pages being temporarily removed: but in awarding the contract, these pages would be replaced, and the contractor requested to sign the complete specifications in the customary manner. The subterfuge often passed undiscovered, so that the contractor had to furnish the items he had not estimated on, but which were formally but fraudulently included in the contract.

Now to warn a competitor when to look out for such treatment would not only be kind but would certainly tend to inspire a wish to return the favour, besides promoting a cordial and helpful relation in general.

In addition to exposing this sort of thing, there are many ways in which a contractor can help his competitor. In general, if one will help the other to make money, that other will reciprocate, and both will profit. It never pays to hurt a competitor, and to malign one's rival in business does more harm to the maligner than to the one maligned.

It is unwise to be suspicious of one's competitor. The chances of his having done just what has been reported are small, and generally the trouble is much more due to some misunderstanding, rather than to anything positively wrong. If a man has reason to think he has been shabbily treated, he would do better to telephone, or better still, call on the suspected man and come to a straightforward understanding. Even if fair play has been stretched a point or two, this is the best way to prevent a

recurrence of trouble. Many a business feud has smouldered along for years, on account of some really trivial thing which could have been straightened out to every one's satisfaction in a three minutes' candid and friendly talk.

In the matter of improved constructive methods, special tools, keeping of costs and administrative improvements, it pays to make friendly suggestions, as something valuable is almost always learned in return. Even if no direct return in kind be made at the time, the better trade relationship which such action tends to establish will be found sufficient recompense.

Business should not be sought by collusion. Irrespective of illegality, the advantage is ephemeral and results in inefficiency. Many a contractor who has temporarily thriven by this means has gone down-hill through the slackness

which results and which brings about inability to compete successfully. Moreover, if business be obtained by collusion there is a reflex action on the efficiency and morale of the office. The practical effect is much the same if a firm be given most of its work without competition, or on percentage. There is no better business tonic than the carrying out of a contract taken at a close price, as it stimulates keenness all along the line, both inside and outside of the office.

Prices should not be cut. It is always a temptation to reduce a bid when intimation is given that it is too high. In a great majority of cases, the general contractor or the "very close friend" is merely trying to save money, and the hint is given to all bidders including the one who is already lowest, that a better price would be considered. Any en-

couragement given to this shopping of bids tends to result in the general lowering of prices, all at the expense of the contractor and at the sacrifice to the owner of good work and satisfactory service.

There is, however, a possible exception which might be made, and that is the case of a contractor who has been regularly employed by the owner, or for whom the architect expresses a preference. In such instances, the contractor should not be considered as having violated the ethics of the business in meeting the lowest price submitted, particularly so, if this suggestion does not come from him. The owner, of course, has the right to award the contract to a concern which has served him faithfully, and he often will give a preference; but the owner's agent, on account of his fiduciary capacity, often feels con-

strained to ask the preferred contractor to meet a figure instead of giving him the preference he deserves. It is sufficiently obvious that the probability of recompense for good work done through the award of further contracts must be a very strong incentive to the continuance of a contractor's best efforts, and to deny him the opportunity to make a trifling cut so as to take the business on the "most favoured nation" basis might, in the long run discourage good workmanship and faithful service.

For a long time contractors in the same trade, and in the same city or vicinity have been forming associations for mutual welfare and protection; and the movement is continually gaining support.

The need of working together was first felt on account of the solid front presented by the workmen in their un-

ion organizations. Without this incentive to unity of action, it is doubtful if many of the contractors' organizations would last. This is partly due to the divergent interests of the large, compared to those of the small contractors, to incompatibility of temperaments, and to more or less innate suspiciousness of one another. Undoubtedly, however, these organizations have a beneficial effect, as a good deal is accomplished, and they pave the way for further co-operative efforts.

As an instance of this may be pointed out the mutual advantages of comparing the labour costs, this item being the most uncertain part of every estimate, and mistakes in it the commonest cause of losing money on a contract. Every time a losing contract is taken, the market price for such work is lowered, and the contractor who suffers the loss

is forced to make it up on some other work, to the detriment of the business generally. In the report on Cost Keeping by the Federal Trade Commission, attention is called to the injury to business when work is done at a loss; and it is clearly shown that this results in the unfair burdening of other work done for other people. It cannot be too positively stated that it is always a disadvantage to have a competitor lose money, and the more that contractors realize this and help each other not to lose money, the more will they help themselves.

As one object of this book is to be of practical assistance, it will not be out of place to show how such unit costs of labour may be obtained. The unit cost of materials should be based on market prices; but the unit costs of labour should be founded on the ascertained

cost of installing units of quantity under varying conditions. Market prices for materials vary, but the labour costs should be virtually constant under the same conditions.

All labour on the job is of course productive, some of it directly, and some indirectly productive. The directly productive labour is that which is employed in the actual cutting, fitting and installing of the materials. The indirectly productive is of a preparatory nature, and includes supervising, laying out the work, keeping records, moving materials, setting up work benches, and other similar work. The cost of the indirectly productive labour will be found to correspond proportionately with the cost of the directly productive; and it should be kept separately.

In arriving at unit costs of productive labour, the first step is to divide the

work into its logical mechanical sub-divisions. Each day the amount of labour is then split up and listed under the proper headings, according to the time expended. As no one man ever works on many different items on the same day, this sub-division will be fairly accurate and, as there is no incentive to favour one item at the expense of another, the average of these daily sub-divisions will be extremely accurate because, by the law of averages, the over-approximations will be offset and balanced by the ones that are under-estimated.

At the end of the job the totals of these sub-divisions of labour costs, applied to the quantities of materials to which they relate, will give the productive unit costs of that particular piece of work. Of course, the unit costs obtained in a small dwelling house, for instance,

would be different from those deduced from factory data; but it will be found that a very close resemblance exists in all similar classes of construction.

It is to be especially noted that, while the foreman is the logical one to make the daily labour sub-divisions, he is not expected to, nor should he be allowed to keep the tally of the quantity of materials used. The daily labour costs are footed up when the contract is completed by one of the clerical force in the office, who also figures from the stock records the materials installed, corresponding to the labour units.

Other ways and means of co-operation might be pointed out, but they are all only limited versions of the golden rule as applied to business. Virtue is said to be its own reward, and sometimes appears to be the only one; but, in the application of the golden rule to

business, the reward is of a much more tangible sort, shown by improved conditions not otherwise attainable. In no better way can these be fostered than by cultivating a business acquaintance and friendship with one's competitors, so as to make possible and easy the interchange of mutually helpful ideas and suggestions.

THE CONTRACTOR AND HIS STAFF

No matter whether the contractor's office staff consists of only one assistant or whether it is departmentalized and has a great many subordinates, the same underlying principles of administration apply.

It is difficult to lay down in specific terms rules or maxims which depend for their success on the spirit in which they are applied. But it is obvious that little can be more desirable than an *esprit de corps* in the members of the staff, and while this may exist in the absence of a set policy, it is certain that the right policy tends to engender it.

It never pays to drive, for the person

driven will only go straight, and up to speed, as long as the reins are in hand. In other words, it takes two to do one man's work; the one who is being pushed or driven and the one who is doing the pushing or driving; and as soon as the pressure is relieved the work halts or stops. It is far better to inculcate initiative in the worker and the desire to work; and this can better be brought about by an attitude of helpfulness, appreciation and encouragement, than by one of scolding, criticising and fault-finding.

Every one makes mistakes, and the man who confesses to an error should be commended for the confession. By giving advice that will guard against the repetition of the mistake, or the making of a similar one, the error is capitalized and becomes of value. Otherwise, if the person at fault is

merely condemned, on the next occasion the chances are that the slip will be covered up and permanent harm done.

The contractor's organization should be taught that the best way to advertise is to do good work; and, as all contractors of experience will say, one job always leads to another. This most important channel to new business is clogged and stopped up if the contract is poorly executed, but if it is well done and satisfaction given, the channel is broadened and deepened, and all sorts of inquiries, and invitations to submit figures, come in. With this end in view, therefore, the making of all possible profit out of the work in hand should be subordinated to building up a reputation to help the future. And if there is a choice of methods or materials, and any doubt arises as to which is to be used or followed, it is a safe rule to be guided

by the owner's best interests rather than only by the relative expense.

It is a foolish and narrow minded outlook which impels some employes not to tell their subordinates all they know for fear that they will become too good. That the very reverse of any such selfish policy is the only intelligent one to follow is clearly brought out by Charles A. Stone of the firm of Stone & Webster, and President of the American International Corporation, in the following extract:

"We teach every man in our employ," he says, "that he must make it easy for us to promote him, and the best way he can do this is by fitting some one to fill his own job. Every man in our organization must train an alternate. Thus promotions cannot disrupt our organization."

"We believe in large salaries and pay many. We also have a profit-sharing plan which has charged the men with ambitions and paid them well. Nine tenths of employers make the mis-

take of looking upon men as cogs in a machine, and expecting those cogs to remain in the spot in which they are placed year after year until they are worn out. By using a man permanently in exactly the same spot they imagine they are receiving the maximum amount of efficiency.

"That has not been our system. We believe in promotions. We want every man to feel that we want him to advance to the very limit of his capacity, and in cases where an unusually able man is offered a bigger opportunity outside we gladly urge him to take it.

"Occasionally, but rarely, we encounter selfishness in carrying out our policy of having two men trained for every job in the organization. Some fellows are afraid to organize themselves out of a job. They fear that if somebody at their elbow is capable of filling their shoes their places will not be so secure. This, of course, is a very narrow view. We convince each man that we want to promote him, but that it will be difficult to do so unless he has paved the way by training a subordinate to step into his place."

As Mr. Stone points out, team work is absolutely essential to any real programme of development of an organization, and it should always be one of

the uppermost points to be borne in mind by the entire staff.

One of the most practical means of getting team work out of an organization is a profit-sharing plan. Not only is this a very fair way of stimulating and reimbursing the administrative staff, but it is the best and safest way of preventing the heads of departments from leaving their employer, either to join forces with some other concern, or perhaps to capitalize the knowledge and experience gained and so create a new and oftentimes dangerous rival firm.

There are various profit-sharing plans in successful operation, adapted to the special needs of different organizations. Of course they all depend on the principle of distribution of profits in more or less close relation to length of service, personal efficiency and position in the business.

SUGGESTED CODES OF PRACTICE FOR THE CONTRACTOR

A great deal of thought and study has been given to codes of practice and codes of ethics, but they are apt to be lost sight of, even if formally adopted by contractors' associations. They are thus ineffective, not through intentional neglect, but because contractors forget having ever subscribed to them. And this forgetfulness seems very natural when one reflects that in practice no reference is generally made to codes of this nature by contractors.

Furthermore, confusion arises in establishing codes by failure to emphasize the differences between the relationships of contractor to engineer, of

contractor to owner or to general contractor, and of contractor to supply house or manufacturer.

The only way to make such codes effective is to have the individual contractor refer to them specifically on his letterhead, by some such legend as follows:

"All proposals are made subject to the standard Codes of Practice recommended by———"
(Giving the name of the association or body supporting the code).

Great care must be taken not to adopt any articles which are unfair or in any way illegal; by so doing the effective value of the entire code will be jeopardized.

Although it is impossible to imagine anything wrong in the agreement on a code of practice by an association of business men, provided the code be fair

and open, some lawyers of the highest standing will not let their clients agree to anything to be done in concert with other members of the trade, for fear of the Sherman law.

In order to avoid any possibility of infringing the laws in regard to restraint of trade it is most important not to attempt to restrain the members collectively, but merely to recommend to the individuals. Therefore any such code should be preceded by a preamble substantially as follows:

"The following codes of principles and practice are recommended to owners, architects, consulting engineers, general contractors, sub-contractors, manufacturers and supply houses, as embodying a co-operative policy beneficial to all concerned and which will be a step towards higher efficiency, greater economy and better service. The association does not attempt directly or indirectly to impose these codes on any one, but respectfully submits same for approval."

All contractors should then openly adopt the codes, because not only are they fair, but also because it would be found that by so doing misunderstandings, disputes and even litigation would be avoided.

PROFESSIONAL CODE OF PRACTICE

The professional code of practice might be very simply summarized by the prohibition of purchase of supplies and apparatus by engineers, and the prohibition of drawing up competitive plans and specifications by contractors.

These broad principles have to be modified where the contractor cannot purchase as advantageously as the engineer, or where the architect or engineers cannot or will not prepare the proper plans and specifications.

If, under these circumstances, the contractor is called upon to lay out the

plans and write the technical description of the work, the functions of the apparatus, etc., he should either be given the work without competition on a time and material basis with the terms expressly understood in advance; or if competitive bids be insisted on by the owner, it should be understood and agreed that the contractor be paid the regular engineering fee for his services. This of course, would discourage the practice of having contractors do engineering, as in such a case the owner would prefer, as he should do, to employ a professional consulting engineer.

CODE OF PRACTICE AS APPLIED TO PUR- CHASING

It is not justifiable or fair to the contractor who maintains an organization for the exploitation, sale and installation of many special materials, devices

and fittings, and by whose efforts and organization these goods are distributed, to have the manufacturer, jobber or consumer derive the benefit of this organization without some commercial compensation being allowed. As explained in the chapter on the contractor's relationship with the supply house, if the manufacturer or jobber sells direct to the consumer at the same price as to the contractor, it is an unfair and predatory sort of competition.

A simple method of correcting this is the establishment of a differential in price, or what is commonly known as a trade discount.

In order, therefore, that the proper inter-relationship between manufacturer, jobber, contractor and consumer be conserved, and the exploitation, sale and distribution of these special supplies be most efficiently and economically car-

ried out, it is recommended that price differentials be adopted between manufacturer, jobber and contractor, so that the regular commercial channel, with certain exceptions, will be from manufacturer to jobber, then to the contractor and then to the consumer. It is recognized in the electric industry, for instance, that this does not apply in the case of apparatus for central stations, as neither the jobber nor the contractor has any service to offer for which either should be paid. Nor does the rule apply in the case of the manufacturer who buys electrical supplies which form a part of goods or machinery to be resold. The automobile maker, for instance, who requires batteries, wire, etc., should not be expected to purchase through the jobber or contractor who is in no way concerned with the exploitation, sale or dis-

tribution of automobiles. Even in the case of electric stoves, the manufacturer of same should be encouraged to buy switches, wire, etc., direct from the manufacturer, as the jobber and contractor will, presumably, make their profit in selling the electric stoves. Other exceptions are in relation to apparatus, articles specially manufactured to order from drawings, and standard articles sold in bulk which are normally shipped direct from the factory to where they are to be used.

But with all these exceptions, there still remains a tremendous volume of supplies and fittings which should be handled by the jobber, as it only is through this means that the public can be served most quickly, with the least trouble, and at the smallest expense.

Just what these trade differentials in price should be, this book does not at-

tempt to say in detail; but, in general, it recommends that they be regulated in accordance with services rendered. One way of determining the value of such services would be based on the average overhead expenses, respectively, of jobber and contractor.

For instance, if the average overhead expense of the jobber were 10 per cent. and that of the contractor 15 per cent., the consumer should pay approximately these amounts plus a fair amount for profit beyond the price at which the manufacturer sells the jobber.

It will be seen from the above that this code of practice as applied to the buying of supplies resolves itself into the policy of the contractor's confining his purchases, as far as possible, to those jobbers and manufacturers who allow the price differentials as outlined. All that is necessary to bring this about is a

campaign of education by means of which it would be shown that co-operation along the lines as explained would be a positive benefit to every one interested.

If, after such propaganda had been launched and generally accepted, any jobber or manufacturer would or could not be made to see the fairness and justice of doing business in the regular way, he should be ostracized commercially in the same way that people are treated socially if they lack the good breeding or taste that are the attributes of companionable human beings.

CODE OF PRACTICE AS APPLIED TO OBTAINING BUSINESS

The following code as submitted herewith is self-explanatory; and many of these articles, substantially as given,

have been in general practice in many localities for a long time.

I. Contractors will submit bids upon condition that a full set of plans, specifications and general conditions be placed at their disposal for a reasonable time, free of cost, for use in their office for the purpose of preparing an estimate. If for any reason the contractor is not so supplied with plans and specifications, he shall charge a fee for making his estimate, to cover the cost and extra risk involved.

II. The standard form of contract of the American Institute of Architects is to be the basis used for all bids, unless otherwise decided by agreement.

III. The contractor shall be paid monthly in cash at least 85 per cent. of the value of the materials delivered and of the labour performed.

IV. Each contract shall provide for

prompt payment, and require final inspection and payment in full within thirty days of the completion of the work covered by said contract, regardless of the final settlement for the building as a whole, or for the work of any other trade.

V. Differences arising between the contractor and other parties on a contract are to be subject to, and settled by, arbitration.

VI. The contractor shall not be responsible for loss due to any delay in the execution of the contract, when such delay is in no way his fault. The time lost on account of strikes, lockouts, fire, washouts, delays by transportation companies, or by any other causes over which the contractor has no control, will be added to the time allowed for completion of the work covered by the contract.

VII. The contractor will not include in his estimate any charges for surety bonds or insurance not required by law; or any general charges for cleaning, removal of rubbish, patching or repairing of plaster, brick or terra cotta; for breaking of glass, for office or telephone service, for water, light, heat, fire-insurance, scaffolding, use of general gangway, of hoisting apparatus, or of enclosures or stairs; or any other similar charges, unless agreed upon in advance.

VIII. The contractor shall not be required to cut any work except his own, and shall not be required to cut, alter or move even his own work if the need arises from any cause for which he is not responsible.

IX. Unless specifically provided for in the contract, an extra charge will be made for any special finish or variation from the standard materials. By

"standard materials" is meant standard materials as regularly listed by the manufacturer whose product is specified.

X. Changes in or additions to contract plans or specifications shall be made the subject of estimate, or shall be based on the time and materials involved.

XI. If the regular and normal progress of the work is held up on account of extras, or changes, or other causes over which the contractor has no control, an interference or interruption charge shall be made, depending on the extent of the interference or interruption.

XII. A fair price shall be charged for drafting or engineering services when the contractor is called upon to render such services.

XIII. The contractor shall not include temporary work of any kind in

his estimate unless the quantities are distinctly stated.

XIV. Unless specifically otherwise stated "Cost" shall be understood to mean cost of material and labour, plus the average administrative or overhead expense.

In some localities where special conditions exist, special articles may be needed, but the code as given above will be found to cover what is generally necessary.

Reference is made in Art. I. to making a charge for estimating, but as this is not customary, insistence might be undesirable lest it provoke too much criticism and opposition. But the suggestion is certainly in the line of approach to justice and is submitted in the hope that the time will come when all estimates are paid for.

Another reason for contractors advo-

cating a reasonable charge for estimating is that it would tend to discourage asking for an unreasonable number of bids. There would, of course, be no objection to the understanding that the contractor who is awarded a contract should not be paid extra for his estimate, as the cost of figuring should be included in the estimate of the cost of the work. In any event the public ultimately pays for the cost of estimating, and if contractors charged for the service, the cost would be borne directly by those receiving the benefit, instead of having it averaged over the whole community.

THE CO-OPERATIVE SECRETARY

It would be difficult to imagine any commercial work more interesting than serving as the professional secretary of an association of keen, ambitious and intelligent contractors. The position could be just as fine as a man might choose to make it; his opportunities to inspire right feeling and to help in the development of practical insight and capacity would be endless. He would find a very wide field of usefulness, and the intelligent exercise of his functions would save the cost of his salary and expenses many times over. It is not an exaggeration to say that it would lie well within his power, by eliminating

waste and saving mistakes, to increase profits five to ten per cent. of the amount of business done by the members of his association, or their net profits from fifty to one hundred per cent.

His policies, acts and functions should of course be such as always to bear the test of the most open publicity. Furthermore, he should confer with architects, engineers and builders with a view to obtaining their moral and practical support, and should do all in his power to elevate and improve in every equitable way the business of the contractor.

Acting, as he would, with no selfish motives, his influence would have great weight. Indeed, if the position were filled by a man of the right moral and intellectual calibre, his power might go to any reasonable limit, as he would be supported by all members of the trade.

His functions and duties should em-

brace more especially those mentioned as follows, which, for the purpose of reference, are summarized under headings:

Contract Costs. Determining the direct and indirect cost of doing different kinds of work under various conditions.

Cost of Changes. Determining the direct and indirect cost of making changes and doing extra work.

Selling Prices. Determining the fair price to be asked for work, whether on a unit basis, cost plus a fee, or on percentage.

Overhead Expenses. Defining and determining overhead expenses.

*Price Cutting.** Discountenancing, by the method of open prices, the cutting of bids.

Legislation. Watching municipal and state legislation.

Unfair Practices. Reporting unfair practices, whether of general contractors, architects or engineers, or of members of his Association.

Promoting Efficiency. Gathering and disseminating information and ideas as to office management, estimating, bookkeeping, advertising, office forms, and, in general, promoting efficiency and eliminating waste.

Union Intermediary. Acting as representative of the Association in dealing with the Union, but not committing the Association in any way without authority.

Professional Relationships. Using his influence in restraining the contractor from doing engineering and in restraining the engineer from doing contracting.

Trade Relationships. Co-ordinating the commercial relationships of the

manufacturer, the central station, the jobber, the retailer and the contractor.

Standardization. Standardizing the specifications; and promoting the practice of standardizing and making fittings interchangeable.

Arbitrator. Arbitrating disputes between members, and between members and architects, engineers or builders.

It is evident from the study of this list of functions that the secretary cannot be held down to any hard and fast lines. A great deal of latitude should be permitted him in carrying out the various provisions; and the successful fulfilment of his duties would depend on the co-operation of the members in spirit, as well as their giving of practical aid and advice.

His work would be of an educational nature, and confined to making helpful

suggestions, rather than in any sense dictating to firms or individuals how their business should be run.

Without further explanation, the programme as outlined might seem visionary, utopian and impractical; but, this is not the case, as will be seen by the analysis which follows:

Contract Costs. It is not claimed that the cost of doing different kinds of construction work under different conditions can be exactly determined, but there is no doubt about the possibility of approximating the costs very closely. The larger part of estimating is done by very loose and unscientific methods; figures are generally based on limited instead of broad experience, and many special factors are often left out of consideration which are of the very greatest importance.

The listing of materials from plans

can hardly be classed as estimating; this is merely the measuring of quantities, and it is assumed that all estimates of material are based on actual quantities and figured at market prices.

Skill, experience and judgment are needed when the question to be determined is the proper amount of labour, and always will be required to some extent, depending on the amount of data available. By itemizing the labour cost on a scientific unit basis, accurate data may be obtained, safer to rely on than the judgment of the estimator.

In the contributing of data, the help of all members of the association should be given, and it should be given freely since this is to the manifest advantage of all. This mutual help and co-operation is the fundamental idea underlying every contractors' association and, although to some persons it may seem

poor policy to give information helpful to one's competitors, they will change their opinion as soon as the advantages of co-operation are made plain. This is one of the initial duties of the secretary—the education of the members in the practical advantages as well as the ethical claims of co-operation.

In the collection of data on costs, the secretary should, in conference with the leading architects, consulting engineers and contractors, agree upon a standard set of units to be kept with reference to the mechanical sub-divisions of the work, as well as with reference to the classes of building construction. The various members of the contractors' association would then receive forms to be used, and the secretary would instruct them in regard to the system employed. It is so simple that no difficulty would be experienced, and the slight

amount of trouble and expense to each contractor would be amply repaid by the increased efficiency of his working force. The fact that a workman knows a written record is kept of his work will keep him up to a higher standard and will tend not only to increase the profits of the business, but the wages of the workman as well.

These costs would be sent to the secretary who, in conjunction with architects and engineers, would tabulate the results. As this information would be of inestimable value to all architects and engineers, they would no doubt show their interest by giving their moral and practical support.

It should be borne in mind that meetings to determine the unit costs to be used in estimating should be of the most public character, with all minutes, discussions and data open to inspection.

If the slightest veil of secrecy or misrepresentation were tolerated the confidence of the architects would be forfeited; and the whole idea of maintaining and obtaining fair prices jeopardized.

In a similar manner the fair indirect cost or average overhead expense allowable on different kinds of contracts would be obtained and scheduled. The contractors would be supposed to show their original office records and books of account if requested, and no difficulty would be experienced in having a reasonable percentage adopted, based on a sliding scale of contract amounts.

If overhead costs were kept on a uniform basis the results would surprise not only the average architect, but also almost every contractor, who seldom realizes how high his overhead percentage is.

Costs of Changes. The keeping of costs of making changes and of doing extra work is more difficult than the keeping of ordinary contract costs. There is, of course, nothing obscure in the direct expense involved, but indirect factors always exist and are often greater in amount than the actual labour and materials involved. This feature is mentioned in the chapter dealing with the contractor and the architect.

On account of the many variable features entering into the cost of changing work already installed, it is impossible to formulate any rule that will apply generally. In making a schedule of prices for straight additional work, liberal increases must be made in the regular contract units, as otherwise all such extras will entail a loss rather than a profit.

In most cases the contract unit prices

may be taken as a basis for the cost of changes, with a percentage added to cover the interference charge, the extra supervision required, any exceptional constructional difficulties, etc.

There will, of course, be special items requiring special estimates, but these will be comparatively few in number.

The advantages of doing work on a unit basis are: the flexibility attained, the fact that the contractor's recompense is based on measured quantities rather than on any one's opinion as to the elements involved, and, last, but not least, the elimination of any temptation of the contractor to slacken his energy and efficiency in the prosecution of the work, as sometimes happens with percentage work.

Selling Prices. In standardizing unit selling prices, whether they be for the purpose of determining the origi-

nal contract, or the amount of the supplementary work, it is most essential that representative architects and consulting engineers be consulted. They should be offered open and free access to the records upon which selling prices are based, and at least their tacit approval obtained. It is not necessary that any formal written approval be given, as no one group of architects would be legally authorized to commit others to the expenditure of clients' money; but it is necessary that all architects, or other persons in a fiduciary capacity, be shown and convinced that the suggested scale of prices is on a perfectly fair and equitable basis, both as to the buyer and the seller.

Of course, there will be objectors to any such price recommendations because there always have been, and always will be, certain individuals whose

main object is to find some unwary contractor who will, through over-anxiousness or error, take work at less than cost. The protests of those in their class may, and should be, disregarded, and to this no reasonable person will object.

As the market conditions change, or the rate of wages rises or falls, the scale of prices should be revised accordingly; and, within practical limits, arrangements should be made so that any authorized agent representing building interests, or even individuals who are building, might be present at the price conferences, and have a voice in the discussion.

It is a great mistake to assume that price regulation eliminates competition. It is perfectly true that the bids submitted for new work will run much more evenly than when indiscriminate and unintelligent competition prevails. In-

stead of the figures varying all the way from 10 per cent. or 15 per cent. lower than they should be, to 30 per cent. or 40 per cent. over what is right, under price regulation they will all come within very narrow limits, with a fair, and only a fair, profit included. Theoretically all prices would be identical but, of course, practically, no two firms would bid just the same. With the bids of various firms running very evenly, there would not be the same financial incentive for the owner to select the lowest bid regardless of all else. Invitations to bid would not only say that the owner reserved the right to reject any or all figures submitted, but would *mean* this; and the award would be made on broad general lines, instead of narrow financial ones. In other words, the contractor who did the best work, who gave the best service, who was the

best situated to carry out the contract, and who would in all probability have it done by the time required, would be given the award.

This method, instead of discouraging competition, would stimulate it; and, moreover, along lines that are fair and just.

The only feature of such a scheme that would be inimical to its success, would be having prices that were too high. The scale must be fair, and should be so close that the inefficient and careless contractor would be penalized by not making a profit, or even by suffering a loss.

Exactly what would be considered a justifiable profit would depend on the scope and quantity of the work. It would not be far out of the way to base the selling prices on the assumption that the contractor is entitled to a ten

per cent. premium over the cost, in return for his skill and ability, and use of capital, plant and organization. By cost is meant not only the materials and labour consumed in the work, but also a fair proportionate amount to be allowed for the overhead or administrative cost; this, of course, being as much a part of the real total cost as the amount of the payrolls and the sum of the bills for materials.

If this scheme were in operation, that old bone of contention, the taking of extra work on another contractor's job, would be automatically avoided, and all such extra work would go to the contractor originally employed, unless his work and services had been unsatisfactory.

Overhead Expenses. Probably not one contractor in a hundred, certainly only the very smallest minority, has an

intelligent conception of just what constitutes overhead expense. Even those who keep the most careful books of account do not realize that the overhead or administrative expense varies to a wide degree with work of different kinds and size.

It is also certain that if any concession is made in the price the overhead item is called upon to bear it all, and more frequently than not it is stricken entirely from the estimate. As a matter of fact, it is the most tangible of any part of the cost, because although labour may be saved and materials bought at a less figure than allowed, the overhead is always present and cannot be eliminated. If any contract is denied its fair proportion of administrative attention, the result is the losing of a pound to save a penny. As the Federal Trade Commission has abundantly

proved, the neglect to allow for overhead expenses has been the cause of more business failures than any other one thing.

The only practical way to avoid this is by education, and the method is very simple. The secretary should first have his association define which items of expense make up the overhead, after which it is simply a matter of bookkeeping.

Very careful inquiry and investigation have shown that the average overhead of the mechanical trades, such as electric work, heating, ventilating and plumbing, is, on the average, over rather than under twenty per cent., and it is obvious that any contractor doing work at net cost plus ten per cent. as is so common, either cheats himself, or overcharges on the cost, thus cheating his employer.

Price Cutting. Probably sub-con-

tractors lose more money by blind cutting of prices than by any other one cause. It often happens that the cut is unnecessary, and that if it had not been made the contract would have been awarded to the same man at his original price; but in any event, it encourages the general contractor to call for cuts and tends to lower prices generally.

In many cities the custom is most common; the general contractors often submit their estimate on the entire work at the sum, or at less than the sum of the individual bids, trusting for profit, to the well-known tendency of the sub-contractors to cut, and to keep on cutting.

Of course, the sub-contractors who permit and encourage this are equally responsible, but the time has come when this should and must cease, or many

well established firms will go out of business.

Whenever a firm fails it is to be remembered that the commercial potential energy stored up through the development and evolution of the organization is wasted, and that it is just as much a permanent economic loss to the community as is the case if a building burns up or a train is wrecked.

Some concerns do not deserve to succeed, on account of their poor business methods, poor work, or their dishonesty; but it is a fact that many a worthy company meets disaster largely through inability to obtain a fair price for doing good work.

In the prevention of price cutting the professional secretary can do as much good as in any other way; if not more. In fact, it would well pay many an employers' organization to retain a secre-

tary for this, if for no other purpose.

It might be asked, why is it necessary to have a secretary for such a simple function? Why cannot the contractors merely agree not to cut, and not bother about having a secretary?—Unfortunately, the habit is too ingrained, and contractors as a class are too suspicious of one another. The many other ways, however, in which the secretary can be of use make his position invaluable, even disregarding this especial duty of preventing the cutting of prices.

Coming now to the method of preventing price cutting, how can this best be done? The method is simple and is based fundamentally, not in endeavouring to depend on the members of the associations committing themselves as to their policies and actions, but by making them see by the broad light of open publicity the foolishness of cutting

prices. This is effected by sending to the secretary a copy of every proposal submitted, whether the original bid or a subsequent one.

Whenever any contract is finally awarded the secretary is notified by the successful firm; and he then sends to all who have competed, but to no one else, a copy of all bids that were submitted, including a copy of any revisions that may have been made. Furthermore, at the monthly meeting of the association the secretary will report all cases where revised bids have been put in.

It should, of course, be understood and agreed that all general contractors be formally advised that the association discontenances the cutting of prices, and that, as soon as every contract is let, all bidders will be informed what all the other prices were.

The advantages of this whole procedure are: (1) that it is absolutely fair; (2) there cannot be a question as to its legality, as the comparison of prices is not made until after the bids have been sent in; (3) on account of its publicity feature, the general contractor could not afford to misrepresent the facts, knowing that, if he did, all his bidders in every instance would promptly be informed; and (4) all sub-contractors would be similarly deterred from cutting by the knowledge that the fact would be reported in open meeting.

Some people contend that prices never should be cut, and there are many supporters of this idea. If this is the prevailing opinion, the association of contractors may so recommend; and even if no penalty be attached, it is doubtful if any contractor would cut, knowing that if he did, all his fellow

members would be informed of it at the next open meeting.

A great many business men of high principles believe, however, that if any contractor has a real personal influence, and if the owner, or whoever it is who has the letting of the contract, prefers him at even figures, he should be allowed to meet the price. As already pointed out, this is perfectly fair in the long run, and in the opinion of the writer no attempt should be made to do away with the privilege. To decline the opportunity would be considered by the person offering it to the contractor most ungrateful, especially if the difference in price were small, and it might hurt a friendship of long standing.

The question should be put to vote and, if passed, no stigma would be attached to a contractor who had met a market price. If the general contrac-

tors thus knew that they could not make any saving in the bids submitted, the award would always go to the lowest bidder, unless one of those not low had a real claim to the job.

Legislation. In following proposed legislation that would particularly affect the business of his association, the secretary would not have time to accomplish much personally. It would be his chief duty to report bills that had been, or were to be, introduced, so that the association could actively support or oppose the measures as they saw fit.

The labour unions, through special attorneys, watch all proposed legislation very closely, and the contractors' associations could well afford to imitate them.

There are great possibilities of constructive legislation for the benefit of contractors, and many of the best laws

have been made at the instance of contractors' associations.

Unfair Practices. As has been previously pointed out, some general contractors resort to all sorts of mean tricks to defraud their sub-contractors. As a general rule, what they do even if legally justifiable, lacks any moral justification, but sometimes they even hold back money illegally or make unfair back charges, though in such small amounts that it would be too expensive to institute legal proceedings.

Frequently a general contractor, and sometimes a supine architect retained by an unscrupulous owner, will withhold a large part of a final payment owing to very technical and trivial omissions from, or faults in, the work of the sub-contractor. Instead of a reasonable deduction in the settlement, one several times too large will be demanded, the

only alternative being litigation or an annoying and time-consuming arbitration.

There is absolutely no way of reaching this class of business vampire except by co-operation of the contractors through their professional secretary. No individual can correct the abuse, but if all members reported their experiences, the cumulative proof resulting would be conclusive, and the secretary would be in a position to do a positive service to the community by warning the offender to cease from unfair methods. There would not be the slightest suspicion of blackmail attached to his warnings as he would have no mercenary motive: he would simply tell such a contractor that there had been complaints lodged against him. If the practice should be persisted in, the contractors would probably cease to do business

with him, but, in general, the mere notification would be a sufficient corrective.

Frequently, after a contract has been awarded, but not executed, the sub-contractor is told that his payments, or part of them, will be in the form of notes. If a protest is made the response is apt to be a threat to give the work to the next man, "who would be only too glad, etc., etc., to accept." Or, unusual and unfair terms of retained percentages are imposed.

These, and other similar practices will persist until stopped by the concerted action of some publicity bureau, and it should be one of the functions of the secretary to promote this.

Of course, the general contractor is not always the guilty party. The sub-contractor is no better than the general contractor, and the only reason why the latter is specially criticized here is be-

cause he, as the buyer, has more opportunities of taking unfair advantages than the one who is being paid.

In the same way that the sub-contractor reports ethical transgressions to the secretary for correction, so should architects, engineers or general contractors appeal to the secretary if any member of the association errs. The association should not, of course, tolerate any infractions of fair business practice; and the only way a professional secretary can do truly effective work and receive public support is by furthering justice impartially and by all possible means.

Promoting Efficiency. In the field of improving conditions of office detail and general business management the secretary's province is especially broad and interesting.

Almost all contractors, in their ig-

norance as to methods pursued by their competitors, imagine that their own particular office force and ideas as to book-keeping, ordering materials, estimating, keeping costs, etc., are nearly letter-perfect. Generally the schemes adopted are the result of evolution, and often are clever and eminently adapted for their purpose. But, no matter how satisfactory most of them may be, there is always room for improvement.

If each contractor, in exchange for his best ideas, could have the option of adopting all of the best ideas of his competitors, it is most obvious that the benefit would be general. This is the very essence of co-operation, and it would not only be feasible but very simple and easy for the secretary to be most helpful in this direction of endeavour.

It would be too much of an undertaking, both on the part of the secretary

and on the part of the members, to attempt to put through many of these improvements at the same time. The most efficient way of bringing about the adoption of, let us say for example, the best form of estimating sheets, would be to have the secretary call for every form in use by the members, and, after a careful study, recommend the best one submitted, or a new form incorporating all of the best ideas of the entire exhibit. In a similar way, all sorts of methods might be generally introduced to save time, to prevent mistakes and, generally, to promote efficiency, and so make for better results and at lower costs.

Union Intermediary. In dealing with the union, the secretary has great opportunities for educating the men, and their confidence may be won by the very simple method of treating them in a straightforward way. It is not rea-

sonable to suppose that rapid progress will always be made, because for years there has been a feeling of antagonism towards their employers, and it cannot be overcome in a moment.

The idea to be inculcated is one of co-operation, and it will be found that the men will always respond to a genuine attitude of helpfulness and friendliness, and the time and trouble spent in advising and instructing them will be repaid to the employers many times over.

Many of the better class of artisans, especially in the skilled trades, go to night schools, and that is to be commended and encouraged. The better educated the men are, the more reasonable they are and the less is the likelihood of strikes, dissensions, and other labour troubles.

Professional Relationships. In the chapter dealing with the inter-relation-

ship between the contractor and the consulting engineer, it was pointed out that the engineer should confine his activities to engineering and that the contractor should not attempt to enter the domain of the engineer.

It is generally the inexperienced or unscrupulous contractor who imagines he is obtaining an advantage by also doing the engineering, and one of the duties of the secretary is to use his influence in discouraging this practice.

Even though the ethical point in question may be open to debate, it should be easy to influence both engineers and contractors on the basis of reciprocity and co-operation. If the contractors would decline to do engineering, thus deflecting this work into the professional channels where it really belongs, the consulting engineers would doubtless be amenable to the policy of including in

the specifications on which the contractors bid apparatus and other items which the engineers often purchase direct.

No hard and fast lines can be laid in regard to including apparatus in the contractor's work, as sometimes the contractors available are incompetent; but there are many occasions when co-operation is possible without being in any way prejudicial to the owner's interests. In fact, the unit responsibility and the resultant advantages often outweigh the possible additional expense involved.

In developing and furthering this idea, the secretary should be governed largely by conditions and circumstances. The most satisfactory and the surest way of bringing the contractors and engineers together is to have them meet at informal luncheons or dinners. At such times ideas may be readily exchanged

and things of mutual interest discussed; and often a merely casual acquaintance will thus develop into a genuine friendship.

Trade Relationships. In the chapter on the relationship between contractor, supply house and manufacturer, the underlying principles of trade co-operation are set forth. In fostering such principles, the secretary cannot be expected to work out the details any more than in many of his other possible functions, but he can be of great use in acting as a representative of the contractors, and as means of communication between them and those with whom they have trade relations.

Standardization. A good many consulting engineers, especially those who are relatively inexperienced, try to show their individuality and, as they think, superiority, by specifying all kinds and

manners of special devices and apparatus when, very often, some standard commercial product would do equally well or better.

To criticise an engineer's plan and specifications is always a rather ticklish operation from the contractor's standpoint; and, consequently, the contractor is often put to no end of trouble, and often to an expensive delay in ordering what is called for, when a candid protest might have saved him. In such a situation the professional secretary can do a great deal with a little diplomacy, which will not only benefit the contractor, but the owner and the engineer as well, as he will be able to save what is often a very considerable and absolutely unnecessary waste of time and money.

Some manufacturers purposely adopt odd sizes, measurements and fittings, so that their product will not interchange

with that of other manufacturers. This is a difficult practice to overcome, and no one contractor can do it; but if the matter were handled by the secretary, voicing as he would the protests of many firms, the chances for reformation would be greatly increased.

Arbitration. On account of his intimate knowledge of the business conditions pertaining to his association, the secretary would be most eminently fitted to hear and arbitrate disputes arising between members and between members and general contractors. In such capacity his personal character, integrity and judgment would be of the greatest importance; and it would thus be within his power to be of immense help and benefit. It is, of course, unnecessary to dilate on the advantages of arbitration, as these are now so univer-

sally recognized from the legal, practical and ethical points of view.

In summarizing the advantages of having a professional secretary, it may be said with assurance that not only would his salary be earned many times over, but he would be in a position to elevate business morally and improve it financially, and would have many opportunities to clear the commercial atmosphere of the sordidness and suspicion which so often darken it now.

THE CENTRAL ESTIMATING BUREAU

THERE are so many arguments in favour of a central estimating bureau that it is a matter of wonderment that such are not found in every large city. Perhaps the most plausible reason is the innate lack of trust with which almost all business rivals view one another. It is this feeling more than any other which inhibits co-operation, and without co-operation waste and inefficiency are everywhere present.

In having work estimated, particularly if it be of a complicated nature, the odds are all against the contractor, and consequently an inherent advantage always lies with the owner, or pur-

chaser. The reason of this is that in making up an estimate, there is never the possibility of including items or materials not specified, while there is ever the chance that something which is required has been overlooked.

All estimates include items of material, about which there is only the question of quantity; but the estimate of labour cannot depend entirely on data, but must depend somewhat on experience and opinion.

Occasionally a contractor will ask to be paid for some item which he had not included in his estimate, and although this is never accepted as a legal excuse provided it is reasonably clear that the item had been specified, there is nevertheless some moral justification for an extra charge, based on the indisputable fact of the ever-present probability of errors of omission which establishes an

advantage in favour of the buyer. This is recognized by some fair-minded people, and the claim honoured, but in the great majority of cases, commercialism governs and the advantage over the contractor is unhesitatingly taken.

There cannot be the slightest doubt as to the ethical propriety of adopting some method of self-protection to eliminate this source of loss to the contractor. It even would be permissible for contractors to compare their estimates before submitting their proposals, and some associations do this.

If their co-operation stopped there, no one would complain except the sharp builder whose profits depend on others' mistakes; but unfortunately some bidders cannot resist the temptation offered for collusive bidding, which is ultimately bad from the business stand-

point, as well as always bad morally and legally.

No such objection can be advanced in regard to the central estimating bureau. As its name indicates, its function is to have all the estimating done from a central office instead of individually by all the contractors who are figuring. The manifest advantages are that it saves an unnecessary multiplication of time, trouble and, consequently, money; and ensures to a great degree increased accuracy.

The saving in time, etc., in having a set of figures compiled once by a skilled and proficient estimating bureau instead of eight or ten times by as many different firms, is obvious, but it is not quite so evident why the figures of a central body should be more reliable than those of a well-managed, experienced, individual organization. The explanation

will be anticipated at once by those who have had experience and who have given the matter consideration, but, for the benefit of the less well informed, it may be well to elucidate.

In the stress of competition, where it is desirable to figure a large volume of work, it is virtually impossible to thoroughly check every estimate that is made. Of course, all estimates should be checked, but in most cases this is done perfunctorily and in a more or less casual way.

In a properly organized estimating bureau all quantities would be taken off separately by at least two independent measurers, and if they did not closely agree the plans would have to be refigured until the chief estimator was convinced that the totals were commercially accurate and reliable.

Another advantage of the central bu-

reau would be the elimination of the psychological or personal element of the estimator. As any contractor of experience will testify, the desirability of any piece of work will unconsciously, if not admittedly, influence the estimator, both as to the amount allowed for labor as well as in regard to the quantities of materials.

If the contractor is not keen to win the particular piece of work being figured, his scaling of the plans will be liberal; but if he is not busy, and is anxious to keep his organization together, the measurements will be very careful and close, and no possible chance omitted in figuring out the shortest and most economical routes.

The central estimating bureau would correct a very frequent abuse that some architects often commit in demanding estimates in an unreasonably short

time. It could, and would, refuse to give figures in shorter than a prescribed time, depending on the complexity of the work, number of plans, etc., thus compelling a little more forethought, or better management on the part of the architect. An individual contractor could not afford to take any such positive stand.

Estimating offices are well known in England, and doubtless will be increasingly common in this country. When once firmly established and their integrity and reliability recognized, proposals based on lists of quantities furnished by the central bureau will become the accepted thing. This would not only be fair and equitable, but would simplify to a great degree the letting of contracts, as under these circumstances any variation in the actual quantities re-

quired would be charged or credited, as the case might be.

There is no question but that a disinterested firm of professional estimators would save many expensive mistakes that are now unfairly borne by the contractor, and by increasing the accuracy and reliability of estimating would be of service to the public generally.

To meet the fears of members that the estimating bureau might make mistakes, as it could and would, the association should guarantee the quantities. A tax levied to cover this insurance feature would be small compared to the losses individual contractors often suffer.

PRICE STABILIZING

THERE is nothing wrong morally, legally or ethically in establishing and maintaining a fair price for good work and efficient service.

In establishing selling prices for construction work, the problem is more complex than with some manufactured articles, and the only practical method is to fix costs as far as possible through a system of units.

In determining the profit to be added, this should be done openly and above-board; otherwise, the architects and engineers would not be justified in giving their moral and practical support. Of course, office expenses will vary between different offices, and with different sizes

of contracts. For instance, there is obviously a greater proportionate overhead cost in beginning, superintending and finishing a thousand-dollar contract than if it were ten times that amount.

With a fair selling price established for the work in the original contract, the contractor would not be entitled to, nor would he expect, the disproportionately higher profits that are customarily sought on extra work.

The total cost to the owner would not be more, and it might often be less than under "cut-throat" competitive conditions, and the results would be much more satisfactory to all concerned.

It is the general opinion of owners, architects, engineers and the public generally that any trade must be very profitable which is prolific in extras, as with electric wiring, because every one knows that the extras cost much more

in proportion than the original work. As a matter of fact, however, those contractors who have studied conditions all agree that the bane of any branch of contracting, replete with changes and additions, is just this factor of extra work. The explanation is, of course, that these extras are anticipated and discounted in making up the tender on the original contract.

It may surprise the uninitiated to know that on certain classes of work where extras are virtually assured, all the low bids received will be less than the actual cost of labour and materials, with nothing whatsoever added for overhead, to say nothing of profit. Indeed, with many extras in sight the contract will very often be let 10 per cent., 15 per cent. and sometimes 20 per cent. below the actual cost.

It is therefore not at all extraordi-

nary that the contractor who is awarded the work charges a relatively high price for the extras. It is not only natural and normal, but it is under the circumstances absolutely fair and equitable, for otherwise the owner would get the work done for less than cost; the contractor would not only not be paid for the cost of superintendence, administrative and other overhead items, but would suffer an actual money loss as well.

This state of affairs always causes friction and dissatisfaction, because the owner cannot, and will not, believe that he is not being robbed.

If outside firms are brought in to do the extras the original contractor feels aggrieved, and if he does not openly expostulate it is only because, in his ignorance, he feels that he is wrong and has been caught in an over-charge, when, as a matter of simple justice, he is

entitled to his charge, and very often to even more than what he asks. This is because even most contractors do not know how much extras really cost.

Among the better class of contractors there is a feeling opposed to going in on another man's job; and this idea is encouraged in the offices of the better architects and engineers. This approval is partly based on appreciation of the ethical questions involved, and partly on the fact that having different contractors on the same work leads to a division of responsibility and all sorts of complications.

This whole situation would be automatically corrected if some arrangement were effected which would establish fair market prices for the original contract and for all extras, as under these conditions all additional work would go without question to the orig-

inal contractor unless his services had been unsatisfactory.

Although almost all costs of contracts and extras in the various branches of the building industry could be figured by unit prices, there would be special items which would have to be estimated in the usual way. Their proportion would be, however, insignificant in amount, compared to the regular items covered by unit prices.

If contractors were free to buy in a strictly competitive sense, in accordance with their knowledge, judgment and ability to pay, the argument against standardizing selling prices might be stronger; but, as a matter of fact, what they pay for labour is regulated or fixed, and the same applies more and more all the time in regard to the materials they require. This condition is largely brought about by the dominating influ-

ence of the big producers of materials, all of whom more or less effectually regulate prices in their respective lines.

There is no question as to the increasing tendency to co-operate, as is shown by the recommendation of the Federal Trade Commission. If, therefore, a practicable way can be shown to stabilize prices for construction work, it would not only be the fair thing to do, but it would also be in harmony from the legal standpoint with the modern trend of affairs.

Reference has been made to a way of ascertaining unit costs, and it has been found from actual experience that this method is simple, practical and accurate.

In order that the data obtained be sufficiently full and the averages reliable, it is obvious that all members of the Contractors' Association must collect

figures on a uniform basis, as has been mentioned heretofore.

It is assumed that the responsible contractors in the various trades have organized, as this is a necessity for coping with the concerted actions of the unions. The professional secretary is a great aid in handling the association's business, but his services are not indispensable in standardizing unit prices so that they may be accepted by representative architects or engineers as fair and reasonable. To bring this about, the contractors should call a meeting with a few architects or engineers whose reputations and professional standings are unquestioned, and in consultation with them, exhibit their original data sheets and agree on a set of unit selling prices covering different kinds of work under normal conditions.

These prices are not to be considered

as absolutely final and binding, but they will be most useful, not only to contractors, but to owner's representatives, as a very quick and close basis of estimating; they will stabilize prices and they will very largely eliminate chances of error.

It will be found that this policy of cooperation with one's competitors, combined with consultation with the architects' committee in the manner described, will result in the general adoption of the unit prices. In fact, the very method used in establishing these prices will be so above suspicion that work will be given out in many cases without competition, the contract being based on the units adopted.

Doubtless the question has arisen in the mind of the reader, what would happen if some contractor did not wish to be bound by the established prices and,

in order to better his chances of getting some particular contract, chose to bid less than what might be termed the prevailing rates?

Of course, this will happen constantly, and there is no legal or other way of preventing it. Sometimes gentlemen's agreements and other collusive schemes are resorted to, but in the long run they do not pay, and it is most certain that they do not permanently work.

No one has come so close to a solution of a way to avoid blind competition as has Arthur Jerome Eddy in his most interesting and admirable book, entitled "The New Competition." In this are worked out and explained some of the advantages of the open price method of competition.

It is impossible to do justice by any short description to that most ingenious, yet absolutely legal and ethical way of

stabilizing conditions. It is so novel and so opposed to all old-fashioned ideas of secrecy in competition, that it is difficult to make those who have not tried it see its advantages. The more, however, it is talked about, the better it will be understood and appreciated, and the following procedure is detailed in hopes at least to do some good in furthering the general adoption of the open price plan.

To begin with, it should be understood that there is nothing illegal or unfair about it. As its name implies, it is open, with nothing concealed and nothing to be concealed. It is the very antithesis of collusion; its doings, minutes, by-laws and constitution are open to all.

As applied to contracting, all members of an open price association are advised, before the letting of any contract, in regard to the figures and all other

details of the proposals of all other competitors in the association who are bidding on that contract. Any member is free to use this information and, if he so chooses, revise his bid so that it will be lower than any other submitted; but, in all fairness he must let all those competitors whose bids he has seen know that he has cut his price and to what extent, so that they can if they wish, cut theirs. In other words, machinery is provided for the auctioning down of the contract until the bottom price is reached.

At first thought, this sounds to the sensitive ear of the contractor as ridiculous and silly, but a careful analysis will show that just the reverse is true, as has been, and is being, proved every day by experience.

It has just been stated that the contractor "must" let his competitors know

if he cuts his price. It should be clearly understood, however, that this obligation to acquaint others with his action is self-imposed and is not enforced by any penalty, except, perhaps the danger of losing in the future the advantage of knowing how his competitors are bidding. In other words, he may be relegated to his former method of bidding in the dark instead of in the open.

It has been found, however, that it is seldom necessary to impose even this penalty, if penalty it may be called. Every member always retains the right to cut his price, but it is found that this right is rarely exercised. In a nut-shell, he finds it does not pay, and so, from purely selfish and mercenary motives, he refrains.

As all of this may sound somewhat complicated, it may be well to describe the machinery and rules, and touch on

the psychology of an open price association.

In forming such an organization, it is virtually imperative to employ some one of experience, partly to avoid any illegalities and partly to explain features that would otherwise be obscure. A secretary having no interest in any of the member-firms must be selected. The professional secretary already described could very properly add this work to his other functions but, of course, to carry all of these out properly would entail the employment of clerical assistants.

The interchanging of all bids and other information is through the secretary, the basic idea being that no one can have access to the bids of others until he has first filed his own figures. Any one filing a copy of his proposal unlocks

all others, whether filed earlier or later than his own.

It is obvious that with members of an open price association, the general contractor is no longer able to play one against the other, and this is, perhaps the supreme advantage. The contractors bidding still have the privilege of cutting each other's prices, but they do so openly and wittingly instead of in the dark and without any knowledge of what their competitors may be doing. Of course, the lowering of a contractor's own figures on misrepresentation by the general contractor is now an impossibility, provided all bidders are included in the open price scheme. It is not necessary to the success of the plan to have all competitors members, but it is advisable to have as many concerns included as possible.

If, for instance, there are four open

price bids and one closed, the result is that the four are operating in eighty per cent. of light instead of one hundred per cent., as would be the case if all five had interchanged figures. It is perhaps therefore advisable not to attempt an open price association until a substantial proportion of those in the trade are in favor; nevertheless, some benefit is felt when only a small proportion enter—and other firms are sure to follow.

If bids are never cut it follows that prices as a whole are bettered, and open price bidding is opposed to cutting, although it does not prevent it. Other things being equal, the low bidder should get the contract, and with open prices this generally follows. It does not always follow that a bidder who is high as disclosed by the open price plan, should not or will not take advantage of this

information and so reduce his figure. It may be that he actually needs the work and so is justified in taking a contract low rather than have his organization disintegrate or lie idle. Under these circumstances he should be allowed to bid lower in just the same way, although probably not to the same degree, as he would if the old-fashioned closed basis of prices prevailed. Under these circumstances a contractor should not be stigmatized as he might be if he acted merely through covetousness.

It is consequently a very important secondary duty of the open price secretary to gather and disseminate statistical information showing the total amount of work which is being figured; and also indicating the percentage under or over his normal average volume which each contractor is handling, compared to his average capacity or performance. The

data for these reports is sent to the secretary, who tabulates the information but does not disclose the gross business of any firm unless that firm expresses its willingness to interchange figures. This is one of the fundamental features of open price agreements: each member may know the inside facts of another's business, provided he is willing to disclose similar information of his own firm. It makes for co-operation of the truest sort.

One of the most educational features of an open price association is the practice of comparing costs on every contract bid upon. This may be done at the monthly meeting, by means of a black-board analysis of the different estimates; or recapitulations of the estimate sheets may be interchanged, in the same way as with the proposals for doing the work.

The second phase of the open price plan is embodied in periodical meetings which are as open as the bidding. They are held at a time and place where any one interested can attend; and it is part of the plan that architects, builders, engineers, and even owners, are welcomed at these meetings, particularly when contracts with which they are associated are being discussed.

At these meetings the secretary reports all cutting of bids which has occurred since the previous meeting, and whenever any member has met or cut another's price, he is expected to tell why he did so.

It is pleasant to assume that most business men are by natural impulse fair in their dealings and would prefer not to have recourse to questionable methods; but even the small minority who are by instinct mean and under-

handed do not like to be held up to scorn and condemned in open meeting. The man who would do a contemptible thing to his competitor if he thought no one else knew it, would think twice before acting if he felt that his action would be aired and discussed by others in his trade.

Undoubtedly, the realization that if a man cut his bid on account of the knowledge interchanged by the open price plan he would be expected to explain in open meeting why he made the cut and all about it, would act as a deterrent to taking advantage of the information so obtained. Strictly speaking, however, he would have the right to cut, and his competitor could, and very likely might, retaliate by cutting still further on the same job or on another occasion.

Everything being so above-board and open, with all motives, opinions, insin-

uations and suspicions aired and discussed, the members see that cutting is injurious to all and, unless there be some good and particular reason for it, unfair.

If an owner or architect, or even a general contractor offered a contract to a high bidder at or practically at the low man's figure, it would be considered *prima facie* evidence that he to whom the work was offered had a real claim to the contract and, under these circumstances, he would not be expected to refuse the business. Before accepting the offer, however, he should, in the spirit of the open price plan, let the original low bidder know of his intention to cut. This might not always be feasible, in which case the circumstances would be told at the next open meeting.

If it developed that any one particular member was always claiming that

such opportunities were frequently offered him, it is very conceivable that the other members might elect not to open their figures to such a universal favourite, in which case, of course, they would not be advised of his bids either.

In practice it is found with open price associations that this combination of publicity and common sense effectually discourages cutting, which is of course only right and fair, as the low bidder is almost always entitled to the award.

Not only is the cutting of prices thus discouraged in the minds of those who represent the selling end of the industry, but also those who have the letting of contracts are very soon influenced. There is nothing that more stimulates vicious competition than price cutting; and if one concern begins, the rest almost inevitably follow.

Contractors who have started an open price plan should be cautioned against expecting too great a benefit immediately. Conditions will improve from the beginning, but the improvement will be a little slow at first. From the fact that it is slow may be assumed that it is sure, and if the improvement in prices is only two or three per cent. each month, as will surely be the case, it certainly is worth the while.

The open price plan is helpful to both the large contractor with an extensive organisation and to the one-man concern. Profits are increased, losses are saved, suspicion is allayed and friendliness is encouraged.

It is not claimed that open prices will bring about the millennium, but there is abundant testimony that the plan is a long step in the right direction, and while it conduces to the contractor's ma-

terial welfare, he has also the moral satisfaction of knowing that his business is being elevated and placed on a higher ethical plane than ever before.

APPENDIX

THE following remarks made by Mr. Eddy regarding an Open Price Society will give a clear idea of what the Open Price plan means, and how radically different it is from all other forms of trade associations:

The value of an Open Price association does not depend upon the rise or fall of prices. The effectiveness of old line associations, price-agreements, gentlemen's understandings, etc., was tested by the extent to which the prices were maintained at a higher level than market conditions warranted. The Open Price plan is a fundamentally different proposition, and if prices fall and members become dissatisfied with market conditions they must not blame the Open Price plan.

I can best illustrate the thought I wish to convey by referring to the New York Stock Exchange which closes at three o'clock. The ma-

chinery of that Exchange does its work day in and day out, year in and year out, mechanically and methodically. It is quite immaterial to the machinery of the Exchange whether prices go up or down, whether there is a panic or not, whether times are good or bad. Unquestionably prices are more stable, fluctuations, both up and down, less violent with the machinery of the Stock Exchange in full public operation, just as prices are more stable and fluctuations less violent, both up and down, with the machinery of an Open Price association in full operation.

You all recall the very great uncertainty regarding prices which prevailed when the Stock Exchange was closed at the outset of the war. The very best of securities fluctuated violently in price. I know from personal experience that on the same day, and within the same hour, when I tried to buy a standard railroad stock I was quoted one price, and when I asked how much I could get for the same stock I was quoted five points difference, and was told that no one knew how much could be bought, or how much could be sold at anywhere near either price. As soon as the Stock Exchange opened these violent fluctuations disappeared, and a reasonable degree of certainty took their place.

The monthly meeting of an Open Price association to discuss generally actual market con-

ditions is very like what would be a meeting of the members of the New York Stock Exchange to discuss actual stock market conditions. The meeting and the discussion, however valuable and interesting, would have no relation whatsoever to either the Open Price machinery or the Stock Exchange machinery. They would go on as methodically and mechanically as a time clock.

The value of an Open Price association, like the value of the Stock Exchange machinery or like the value of any Government statistical bureau, lies in the information it furnishes, in the systematic collection and distribution of reliable data, and whether prices rise or fall does not affect in the slightest degree the value of the Open Price association, the Stock Exchange mechanism, or the Government Statistical Bureau.

It goes without saying that men would not go to the trouble and expense of organizing and conducting an Open Price association if they did not expect to better conditions in their industry, but an Open Price association does not attempt to improve conditions and reap larger profits by arbitrarily controlling and fixing prices. If prices are better and more constant, it is simply because the Open Price mechanism furnishes information which enables men to better adjust their business to market conditions.

The Government crop reports instantly affect prices of all the crops covered. This is so true that these reports are guarded with the utmost secrecy until the precise hour for publication. They are gathered at great expense by the Government for the express purpose of enabling farmers to sell their products more intelligently—in other words to enable farmers to make more money year in and year out. All this work on the part of the Government is being rapidly developed and extended and yet is in its infancy. As a rule Government reports are too long delayed to be of much benefit. The time will come when they will come out as frequently as trade papers. The aim of the Open Price association is to do more thoroughly daily and weekly what the Government does monthly or yearly.

A natural question is, "If prices are better why don't customers object?" As a matter of fact buyers, when they understand the operation of an Open Price association, heartily approve it. This is a matter of record and of common knowledge in the associations. Buyers do not object to better prices or higher prices so long as the prices are not arbitrarily controlled. They do object to being victimized, but when they see that the Open Price policy tends to eliminate secret rebates, discounts, favours, and unfair discriminations between purchasers, and

tends to place purchasers on a more nearly uniform basis, they heartily endorse the plan. The Federal Trade Commission Act now makes unfair competitive methods illegal. The laws of nineteen states and the Clayton Act makes unfair price-discriminations illegal. The tendency of the time is toward uniform treatment of buyers, large and small, toward giving the small competitor just as good a chance for success as the big, and toward giving the small buyer just as much for his money as the big buyer. The Open Price plan is a direct aid to the enforcement of these laws, inasmuch as it records daily all price variations. If there are any unfair competitive methods, or any unfair price-discriminations, the records of an Open Price society disclose same, hence they tend automatically to disappear.

Aside from any advance whatsoever in prices, the Open Price plan makes a good profit on the following items,—the elimination of secret rebates, secret discounts, secret terms, and unfair price-discriminations generally, all of which tend to the unfair advantage of one buyer as against all other buyers who do not receive these secret favors; the removal of opportunities for buyers to make false and demoralizing statements regarding quotations; it is frequently stated in meetings of Open Price associations that this feature alone justifies the

existence of an organization, and more than pays for all the time and money spent.

Finally it may be stated that associations have voluntarily dissolved, and members have resigned, because they could not see any price-improvement, and did not have the patience to await the benefits that would certainly come from improved, franker, and more public methods of doing business.

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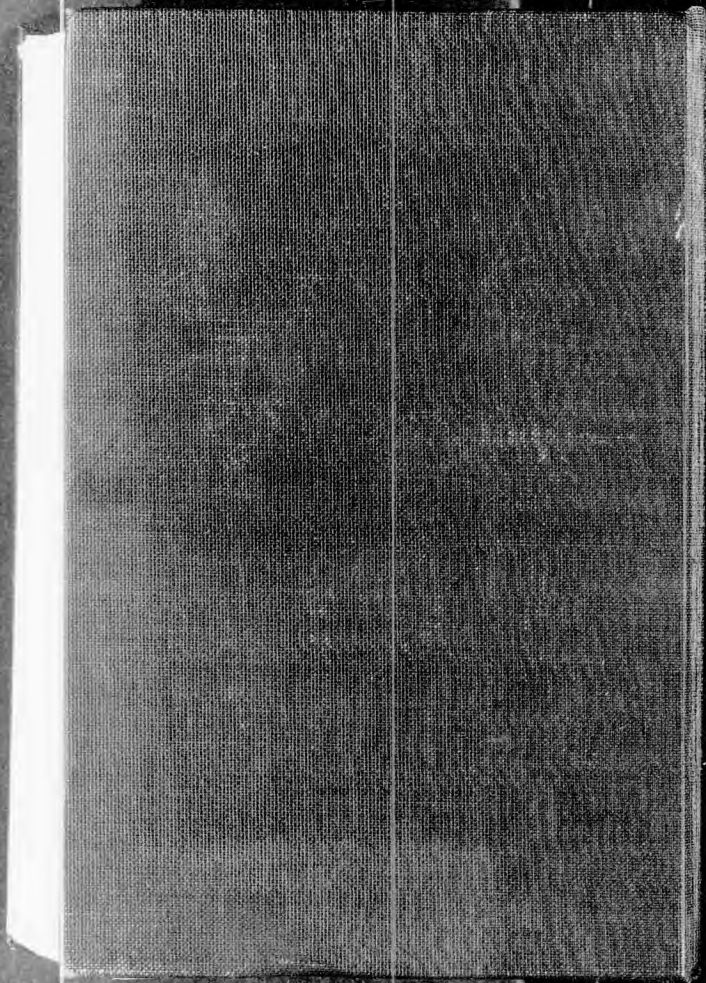
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